DOCUMENT RESUME

ED 112 194 95 CE 005 212

TITLE	Developing a List of Competencies for the Communication Skills Area in Vocational-Technical Post-Secondary Education: Final Report.
INSTITUTION	Mid-State Vocational, Technical, and Adult Education District, Wisconsin Rapids, Wis.
SPONS AGENCY	Office of Education (DHEW), Washington, D.C.; Wisconsin State Board of Vocational, Technical, and Adult Education, Madison.
REPORT NO	VT-102-143
PUB DATE	Apr 75
NOTE	129p.; Document is not available in hard copy because of marginal reproducibility
EDRS PRICE	MF-$0.76 Plus Postage. HC Not Available from EDRS.
DESCRIPTORS	Cluster Grouping; *Communication Skills; Employers; Graduate Surveys; *Performance Specifications; *Post Secondary Education; Questionnaires; *State Surveys; Tables (Data); *Vocational Education
IDENTIFIERS	Wisconsin

ABSTRACT

Communication skills classes must prepare students for living and for earning a living. As the postsecondary technical-vocational schools throughout Wisconsin showed great differences in the content of their communication skills courses, both among schools and within various educational programs, a statewide survey was conducted to determine the importance of various communication skills competencies. A list of 40 communication skills or tasks was developed. Questionnaires containing these 40 competencies were sent to employers and to graduates of vocational-technical programs for ranking of the competencies in 15 occupations in job clusters for business technology, secretarial and related science, industrial machine, health vocation, and industrial technology. Detailed rank orders and mean responses are presented in the report. Survey results indicated that some communication skills are more important than others and that different occupations require different levels of competency. Results also supported the cluster concept that vocational programs can be clustered for the purpose of teaching or learning communication skills. The appendix includes a bibliography of communication skills efforts, list of related microfiche documents, correspondence, and survey instruments. (MF)

****
* Documents acquired by ERIC include many informal unpublished *
* materials not available from other sources. ERIC makes every effort *
* to obtain the best copy available. Nevertheless, items of marginal *
* reproducibility are often encountered and this affects the quality *
* of the microfiche and hardcopy reproductions ERIC makes available *
* via the ERIC Document Reproduction Service (EDRS). EDRS is not *
* responsible for the quality of the original document. Reproductions *
* supplied by EDRS are the best that can be made from the original. *
****

ED112194

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
NATIONAL INSTITUTE OF EDUCATION
THIS DOCUMENT HAS BEEN REPRODUCED EXACTLY AS RECEIVED FROM THE PERSON OR ORGANIZATION ORIGINATING IT. POINTS OF VIEW OR OPINIONS STATED DO NOT NECESSARILY REPRESENT OFFICIAL NATIONAL INSTITUTE OF EDUCATION POSITION OR POLICY

FINAL REPORT

Project No. 99-026-151-184

DEVELOPING A LIST OF COMPETENCIES FOR THE COMMUNICATION SKILLS AREA OF NATIONAL TECHNICAL POST-SECONDARY EDUCATION

(VT 102 143)

MSTCi

April, 1976

MID-STATE VOCATIONAL, TECHNICAL AND ADULT EDUCATION DISTRICT
WISCONSIN RAPIDS, WISCONSIN

AND

WISCONSIN BOARD OF VOCATIONAL, TECHNICAL AND ADULT EDUCATION
MADISON, WISCONSIN

ED112194

FINAL REPORT

Project No. 14-040-151-184

DEVELOPING A LIST OF COMPETENCIES FOR THE COMMUNICATION SKILLS AREA

Dr. Max Farning, Project Supervisor

Elaine Boyce, Research Assistant

Ralph Mahnke, Research Assistant

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
NATIONAL INSTITUTE OF EDUCATION
THIS DOCUMENT HAS BEEN REPRODUCED EXACTLY AS RECEIVED FROM THE PERSON OR ORGANIZATION ORIGINATING IT. POINTS OF VIEW OR OPINIONS STATED DO NOT NECESSARILY REPRESENT OFFICIAL NATIONAL INSTITUTE OF EDUCATION POSITION OR POLICY

Mid-State Vocational, Technical and Adult Education District

Wisconsin Rapids, Wisconsin

Earl F. Jaeger, District Director

April, 1975

CE005 212

The research reported herein was performed pursuant to a grant or contract with the Wisconsin Board of Vocational, Technical and Adult Education, partially reimbursed from an allocation of federal funds from the U. S. Office of Education, U. S. Department of Health, Education and Welfare. Contractors undertaking such projects under Government sponsorship are encouraged to express freely their professional judgment in the conduct of the project. Points of view or opinions stated do not, therefore, necessarily represent official Mid-State Vocational, Technical and Adult Education District, State Board or U. S. Office of Education position or policy.

ACKNOWLEDGMENTS

Appreciation is extended to all who have contributed to this study.

Special appreciation is extended to the hundreds of employers throughout Wisconsin who have given generously of their time to make this study possible. Also, a sincere thank you is extended to the hundreds of Wisconsin VTAE graduates who participated in this state-wide study.

To complete this study it was necessary that numerous organizational units participate in preparing for the study as well as carrying out the study. These organizational units included (a) the Wisconsin Vocational Technical and Adult Education Board staff, (b) the Student Services Departments of the Wisconsin VTAE Districts, and (c) the management and instructional staff members of the Mid-State VTAE District.

Thank you.

TABLE OF CONTENTS

Chapter		Page
I	Introduction	1
II	The Problem	6
III	Literature Review	13
IV	Design of the Study	15
	Programs Surveyed	19
	Type and Size of Sample	21
V	Results of the Study	22
	Results of Interviews	68
	Conclusions and Recommendations	76
	Bibliography	77
	Appendices	78
	Appendix A Bibliography of Communication Skills Efforts	79
	Appendix B Microfiche Documents	81
	Appendix C A List of Communication Skills and Tasks	84
	Appendix D Cover Letter and Questionnaire Distributed to Faculty and Management Team Members of Mid-State Technical Institutes	88
	Appendix E Members of Ad Hoc Committee	93
	Appendix F Cover Letter and Questionnaire Sent to Supervisors (Employers)	95
	Appendix G Cover Letter and Questionnaire Sent to VTAE Graduates	101
	Appendix H Cover Letters for Second Mailing	107

Table	Table Title	Page
Table 1:	Number of Instruments Sent and Number and Percent of Instruments Returned	23
Table 2:	Rank Order and Mean Response of the Forty Communication Skills Competencies Within Programs and Program Clusters According to Responses of VTAE Graduates	24
Table 3:	Rank Order and Mean Response of the Forty Communication Skills Competencies Within Programs and Program Clusters According to Responses of Supervisors	25
Table 4:	Rank Order and Mean Response for Each of the Forty Competencies as Determined by Supervisors of Accounting (10-101) Graduates	27
Table 5:	Rank Order and Mean Response for Each of the Forty Competencies as Determined by Supervisors of Data Processing (10-107) Graduates	28
Table 6:	Rank Order and Mean Response for Each of the Forty Competencies as Determined by Supervisors of Marketing (10-104) Graduates	29
Table 7:	Rank Order and Mean Response for Each of the Forty Competencies as Determined by Supervisors of Clerk Typist (31-106) Graduates	30
Table 8:	Rank Order and Mean Response for Each of the Forty Competencies as Determined by Supervisors of Stenography (31-106) Graduates	31
Table 9:	Rank Order and Mean Response for Each of the Forty Competencies as Determined by Supervisors of Secretirial Science (10-106) Graduates	32
Table 10:	Rank Order and Mean Response for Each of the Forty Competencies as Determined by Supervisors of Mechanical Drafting (31-421) Graduates	33
Table 11:	Rank Order and Mean Response for Each of the Forty Competencies as Determined by Supervisors of Machine Tool Operation (31-420/32-420) Graduates	34
Table 12:	Rank Order and Mean Response for Each of the Forty Competencies as Determined by Supervisors of Practical Nursing (31-510) Graduates	35
Table 13:	Rank Order and Mean Response for Each of the Forty Competencies as Determined by Supervisors of Medical Assistant (31-509) Graduates	36

Table	Table Title	Page
Table 14:	Rank Order and Mean Response for Each of the Forty Competencies as Determined by Supervisors of Operating Room Assistant (31-512) Graduates	37
Table 15:	Rank Order and Mean Response for Each of the Forty Competencies as Determined by Supervisors of Electronics (10-605) Graduates	38
Table 16:	Rank Order and Mean Response for Each of the Forty Competencies as Determined by Supervisors of Mechanical Design (10-606) Graduates	39
Table 17:	Rank Order and Mean Response for Each of the Forty Competencies as Determined by Graduates of the Accounting (10-101) Program	41
Table 18:	Rank Order and Mean Response for Each of the Forty Competencies as Determined by Graduates of the Data Processing (10-107) Program	42
Table 19:	Rank Order and Mean Response for Each of the Forty Competencies as Determined by Graduates of the Marketing (10-104) Program	43
Table 20:	Rank Order and Mean Response for Each of the Forty Competencies as Determined by Graduates of the Clerk Typist (31-106) Program	44
Table 21:	Rank Order and Mean Response for Each of the Forty Competencies as Determined by Graduates of the Stenography (31-106) Program	45
Table 22:	Rank Order and Mean Response for Each of the Forty Competencies as Determined by Graduates of the Secretarial Science (10-106) Program	46
Table 23:	Rank Order and Mean Response for Each of the Forty Competencies as Determined by Graduates of the Mechanical Drafting (31-421) Program	47
Table 24:	Rank Order and Mean Response for Each of the Forty Competencies as Determined by Graduates of the Machine Tool Operation (32-420) Program	48
Table 25:	Rank Order and Mean Response for Each of the Forty Competencies as Determined by Graduates of the Machine Tool Operation (31-420) Program	49
Table 26:	Rank Order and Mean Response for Each of the Forty Competencies as Determined by Graduates of the Practical Nursing (31-510) Program	50

Table	Table Title	Page
Table 27:	Rank Order and Mean Response for Each of the Forty Competencies as Determined by Graduates of the Medical Assistant (31-509) Program . . .	51
Table 28:	Rank Order and Mean Response for Each of the Forty Competencies as Determined by Graduates of the Operating Room Assistant (31-512) Program	52
Table 29:	Rank Order and Mean Response for Each of the Forty Competencies as Determined by Graduates of the Electronics (10-605) Program	53
Table 30:	Rank Order and Mean Response for Each of the Forty Competencies as Determined by Graduates of the Mechanical Design (10-606) Program . .	54
Table 31:	Rank Order and Mean Response for Each of the Forty Competencies as Determined by Supervisors Within the Office and Distribution Cluster . .	57
Table 32:	Rank Order and Mean Response for Each of the Forty Competencies as Determined by Supervisors Within the Secretarial Cluster	58
Table 33:	Rank Order and Mean Response for Each of the Forty Competencies as Determined by Supervisors Within the Industrial Machine Cluster	59
Table 34:	Rank Order and Mean Response for Each of the Forty Competencies as Determined by Supervisors Within the Health Cluster	60
Table 35:	Rank Order and Mean Response for Each of the Forty Competencies as Determined by Supervisors Within the Industrial Technology Cluster . . .	61
Table 36:	Rank Order and Mean Response for Each of the Forty Competencies as Determined by Graduates Within the Office and Distribution Cluster . . .	63
Table 37:	Rank Order and Mean Response for Each of the Forty Competencies as Determined by Graduates Within the Secretarial Cluster	64
Table 38:	Rank Order and Mean Response for Each of the Forty Competencies as Determined by Graduates Within the Industrial Machine Cluster	65
Table 39:	Rank Order and Mean Response for Each of the Forty Competencies as Determined by Graduates Within the Health Cluster	66

Table	Table Title	Page
Table 40:	Rank Order and Mean Response for Each of the Forty Competencies as Determined by Graduates Within the Industrial Technology Cluster	67
Table 41:	Number of Times Per Week That Selected Competencies Were Used On the Job by Employees According to Supervisors (Based on Personal Interviews)	74

CHAPTER I

INTRODUCTION

Communication teachers in the Wisconsin Vocational, Technical and Adult Education system are partners in trying to develop the same end product--young men and women who are adequately prepared to succeed in the world-of-work and who are motivated to participate in the institutions of their community.

The communication teacher is a cooperative partner with other general education teachers and with the vocational-technical teachers in preparing individuals to be this kind of contributing member in society. In our society, which rapidly undergoes social and technological changes, however, the worker must expect to be part of a continuing, lifelong, educational process.

Initial job entry training requires the vocational-technical teacher to equip his students with the most up-to-date knowledge and skills in his field and to be able to use and understand its most recent tools and equipment. The communication teacher, on the other hand, must not only prepare the student to accept change, understand change, and prepare for change, but must also prepare the student to use communication skills effectively on the job and in the community.

Communication Skills does not fit neatly into the spectrum of General Education. It does not blend well with Science and Math, whose content and objectives relate closely to vocational-technical preparation. And neither does it group with Economics, American Institutions or Psychology, whose content deals with the individual in relationship to himself, to other individuals, to groups, and to society's significant institutions.

The word "skills" implies that there are some recognizable competencies that can be taught and tested. These competencies are usually broadly recognized as reading, writing, speaking and listening. Within each of these four broad disciplines is found

innumerable specific skills from punctuation, grammar, and spelling to business letters and report writing. With few exceptions, the specific competencies and skills found in the communication skills courses of study throughout the state system can be classified into these four general areas.

When one examines the specific communication skills that are being taught in the technical schools throughout the state, one discovers that each school has decided not only to teach different skills but also to give differing emphasis to those skills. The problem is further compounded by the multitude of communications curricula that have been developed for the broad offering of vocational-technical programs in Wisconsin.

The Wisconsin Vocational, Technical and Adult Education system offers two-year Associate Degree programs, two-year vocational programs, one-year vocational programs and less than one year vocational programs. State Board guidelines require that each one of these programs include specific courses and a minimum number of credits or hours before a degree or diploma can be awarded. One will find, however, that within these programs the communication courses have different titles. Although titles themselves may not always indicate a significant difference in the course content, it has been found by the researchers of this project that there exist great differences in the actual content of communication courses for the same programs throughout the state.

These differences have resulted in a state-wide system of vocational-technical education that often has little course content similarity from district to district. A student transferring from a communication course as a part of a welding program in a southern district of the state may not be able to recognize it as the course for the same program in a northern or western district. One must ask himself if the communication

skills competencies for a secretary in one part of the state are really that much different than in another part of the state.

If indeed there are specific communication skills that are critical and essential for a student to possess at the time of initial job entry and for job advancement, these skills should be taught at all of the vocational-technical schools. This would mean that the Practical Nursing graduate would be taught essentially the same communication skills whether she attended Madison Area Technical College or District One Technical Institute. One certainly cannot expect students to find or necessarily want employment in their home district. Logically, this might mean that the Practical Nurse graduating from Mid-State Technical Institute in Marshfield might find employment at Wisconsin General Hospital in Madison and the Madison Area Technical College graduate might find employment at St. Joseph's Hospital in Marshfield.

The career of Practical Nursing requires the entrant to be competent in using specific communication skills if she is going to be successful. Most employers do not have the personnel, time or money to develop a complete on-the-job training program for the new employee. The employer seeks graduates of vocational-technical schools because he assumes these employees (graduates and employees often used interchangeably in this report) will have those skills necessary to do the required tasks at the time of initial employment. The employer wants to feel that the graduate of a Practical Nursing Program, a Welding Program, Mechanical Design Program, or an Auto Mechanics Program comes to him with the necessary job skills (including communication skills) to perform efficiently from the first day on the job.

This means that the employer needs to spend only a minimum of time and manpower to have the new employee contributing fully and functioning as an integral part of the work

team. Hopefully, the communication skills training will also enable the initial job entrant to advance on the job as more responsible positions become available.

Employers are usually looking for more than workers equipped with specific job skills; they know that the execution of any task succeeds or fails with the employees' ability to communicate. Nothing in the world of work is initiated or completed without a multitude of communication skills being used at all levels and by all members of the organization.

The marketing graduate, the machine tool operator, the medical assistant, and the accountant must come to the employer with specific communication skills competencies at the time of initial employment. Writing a short report clearly and concisely may be a more important skill for the marketing student than the operating room assistant. The ability to listen tactfully may be a very important skill for both of these employees to be effective contributing members in their daily job responsibilities.

Employers of clerk typists, stenographers, and secretaries graduating from Wisconsin vocational-technical schools have the right to assume that these employees will begin their careers possessing more than just typing and filing competencies. The new worker, hopefully, will arrive with a complete storehouse of communication skills competencies. Skills in using the telephone effectively, using acceptable punctuation and correct spelling, understanding oral instructions and directions, and following up problems and giving attention to details are needed at the outset of employment.

Graduates of vocational-technical schools displaying these essential job-related communication competencies from the first day on the job give credibility to communication skills classes and to the total philosophy of vocational-technical education. Why shouldn't employers expect vocational-technical graduates to come to them with a com-

plete set of communication skills competencies for the job they have been hired to do?

Most employers are also concerned about the communication skills abilities of the people they hire for the long haul. Competencies that may not be important at the time of initial employment may be functionally critical in six months or a year after being hired. The employer expects his employees to move into different work roles as his tenure with the company grows. Usually new job responsibilities require a greater degree of competency in using specific communication skills or require competency in communication skills that were not needed at the time of initial job entry. Writing short reports may not have been a requirement of the beginning salesman, but once he is given his own region or territory periodic reporting becomes an important part of his job responsibilities.

The stenographer who initially found her job requiring that she be able to use the telephone, write business letters, proofread and edit transcription material, and be an excellent speller and grammarian, may find after a short time on the job that her responsibilities have shifted. She may find that new job responsibilities require her to function more often in interpersonal situations with fellow employees and customers. Her ability to listen tactfully, handle receptions and introductions, and orally give directions and instructions may occupy most of her time.

This introduction has attempted to illustrate the important task that communication skills has in the total preparation for men and women entering or re-entering the world of work. It has also served to point out that communication skills must include those skills that are necessary for initial job success and future job advancement. The next section will elaborate on the problem that led to this state-wide survey of employers (supervisors) and VTAE graduates to determine the importance of specific communication skills for 15 vocational-technical programs.

CHAPTER II

THE PROBLEM

The problem that suggested a survey of employers and VTAE graduates to determine the importance of specific communication skills competencies for a select number of vocational-technical programs has been introduced. It is a problem that exists for each and every course that becomes a part of a specific vocational-technical program offered in the state system. It is a particular problem, however, for general education courses such as Communication Skills. This is true because of the overall philosophy of Wisconsin's vocational-technical education system: "Learning for living in today's world of work."

It was previously mentioned that communication skills courses do not seem to align themselves with the general education courses, economics, american institutions, or psychology of human relations because the thrust of these courses is general information and knowledge of the world in which one lives. The emphasis in these general education courses is not on acquiring skills and concepts in order to earn a living in today's world of work, but to learn to live in today's world.

Neither does the communication skills course fit in the same category as the mathematics and science general education courses. The applied science, technical science, and mathematics courses are handmaidens for the vocational-technical programs. Much of what is taught in the "hard-core" courses of any vocational-technical program is incomprehensible without this mathematics and science foundation. The words "applied" and "technical" have significance in proclaiming this close tie to the programs of which they are a part. A more specific tailored science course, such as metals science, or a specific mathematics course, such as business mathematics, indicates that mathematics and science are not general education classes in a strict sense.

Communication Skills classes are the unique "Humpty-Dumpties" of general education: they do not fall into an either/or classification. Instead they must prepare students for living in today's world and must also prepare them for earning a living in today's world of work. These are the classes which re-emphasize the importance of "communications" as the means of man relating to man from the past to the present, within the present, and from the present to the future. Through this ability to communicate, men tangle and untangle themselves from a never ending series of relationships with their fellow men on the job and off the job.

Much of their success in the world-of-work depends on their competencies in using communication skills. A secretary without the skill of using appropriate punctuation, of taking effective notes, or of responding to customers' complaints, may find herself replaced by a girl whose educational training did prepare her for these job-related communication skills. The mechanical designer whose communication skills class neglected to prepare him to read and comprehend job-related technical materials, to expose him to the techniques of leading a problem-solving discussion, or to require him to use abbreviations and numbers correctly in written reports may not have the opportunity or be given the time to learn these communication skills on the job. Someone else is always waiting in line with the required competencies in these skills. Someone else will have completed the same mechanical design program, but that someone else may have had a communication skills course which emphasized competencies in the skills that a mechanical designer needs in order to survive the initial trial employment period and to advance on the job as opportunities present themselves.

The problem of this survey is an informational one. If success on the job at the time of initial employment and advancement on the job depend on the employee's competencies in using specific communication skills, then what these essential skills are and the degree

to which they are important need to be identified. There are two sources which would give valid input about those communication skills which are critical to job success. One would be the vocational-technical graduate himself, and the other would be the supervisor or foreman of specific job areas.

The graduate of a vocational-technical program who is working at a job related to his program would be able to provide relevant response as to which communication skills must be taught in the classroom. His daily work responsibilities enable him to evaluate the communication skills which he has found important in his work and those which are not important. Although relevant information about the level of importance of various communication skills can be obtained from the graduate on the job, his evaluation is always as incomplete as his work experience. Initial job entry communication skills may be far different from those skills and their degree of importance a year or five years after being on the job. Another problem in allowing graduates on the job to be the primary source for information about the importance of specific communication skills is their ability to be objective. They are often not aware of how important various communication skills are in their daily work because of their unconscious involvement with these skills. For example, the practical nurse may not be able to objectively judge the importance of being able to to respond and to communicate nonverbally with her patients. Yet, she may or may not be using this skill effectively. Neither may the electronic technician who has been on the job for only a year be aware of the importance of being able to orally present technical data clearly and concisely. He may be using this skill daily but never have given it much significance.

Obtaining information from the graduate of a vocational-technical program about the degree of importance of communication skills on the job, therefore, would have to be a secondary source. As a primary source for information, it was

decided to go to the supervisor or foreman of a specific job area. Supervisors would be an excellent source for valid information because they usually obtain their position by demonstrating competency and by also having moved up the job ladder through years of experience. The supervisor would be the one person most familiar with the full range of job requirements. The supervisor stands in the best position to advise communication skills teachers of the competencies required because he is responsible for the production and performance of the employees in his department.

Many informational surveys have used personnel directors, managers, or executives as the primary sources for responses. In the larger companies, these people are often too far removed from the communication skills requirements of the departmentalized employee. The immediate overseer of the employee's job responsibilities would seem to be the best source, and so the immediate supervisors of the employees became the primary information source for this survey.

Some of the vocational-technical schools have tried to make their communication skills classes more relevant by hiring only communication skills teachers who have had extensive occupational experience. In reality, however, this practice, for most schools, might be rather inconsequential. The few communications teachers with occupational background had their experience in only one area. Most schools have their students heterogeneously grouped in the communications classes while a few schools have homogeneous grouping according to program. Regardless of the scheduling procedure, the communications teacher with occupational background as a secretary or clerk typist is most often teaching communication classes representing many programs or a program unrelated to his or her occupational experience. Then, too, one must question the significance of that occupational experience that occurred 10 to 40 years ago.

The reader should not feel that this present discussion is unrelated to the problem of the survey. The questions raised about the relevancy of faculty work background and the questions to be asked next about faculty educational background are significant. Hopefully, the answers to these questions strengthen the premise that teachers of communication skills must depend on supervisors and employees in business and industry in order to develop relevant courses of study.

To point up the significance of this position, consider the following question: Who, in most vocational-technical schools in Wisconsin, is responsible for developing the courses of study for the various communication skills courses being taught? The answer is an obvious one--the communications teachers themselves. In most cases the course of study for any particular communications course is the product of one individual.

When a close look is taken at the typical educational background of the individual who has been responsible for developing a communications curriculum, the need for surveying business and industry's needs become grossly understated. The typical communication skills teacher (as has been stated) has not had any occupational background for the programs represented in his classroom. In addition, if he has followed the standard academic route, he majored in college English and from there secured a high school job teaching English. From high school he moved into a vocational-technical institute, probably having started or possibly completed his master's degree in English during his high school tenure.

When one looks closely at his course qualifications, one finds his undergraduate and graduate degrees often amount to approximately 80% literature and 20% writing and speech. The vocational-technical schools get communication skills instructors who are prepared in little of what smacks of job and world-of-work related language skills and concepts. Furthermore, the typical college liberal arts English major has been

instructed by his own kind--men and women who have never been outside the classroom. The English major is strong in American novelists, Romantic poets, platform speaking, Black poetry, contemporary writers, and a host of seminars that prepare him for very little that is related to the communication skills needed in today's world of work.

Admittedly, some colleges and universities are calling their speech courses communication courses, and one can now receive a degree in communications instead of speech, but this rhetorical change has not altered the content of the courses nor the lifelong academic experience of the professors teaching these courses.

Is it any wonder, then, that many communication skills teachers wonder whether what they are teaching comes anywhere near to doing a halfway adequate job of preparing graduates of vocational-technical programs to be competent in using specific communication skills required at the time of initial job entry and required for job advancement.

It is also interesting to note that the development of vocational-technical programs at the local level and their continued up-dating is in part handled through on-going advisory committees. The advisory committee concept has given significant input to the development of course content for the hard-core courses making up every vocational-technical program. The advisory committee consists of employers and employees from the program area.

Advisory committees don't usually concern themselves with the course content of the communication skills classes because these classes, along with the other general education classes, are required, and their content is already determined by their very existence for other ongoing programs. What is significant in terms of this survey project is the advisory committee concept itself: it is considered important to have direct representatives from the world of work--employers and employees--contributing

their expertise in developing the curriculums for the classes in a particular program. This is sound direction. No one is better qualified to know what competencies are needed to be a business data processor, a real estate salesman, a clerk typist, or a mechanical draftsman than the people working in these positions and supervising these positions. Similarly, the researchers of this project sought to seek the advice from supervisors and employees from throughout Wisconsin in order to determine the degree of importance of specific communication skills competencies for 15 programs.

Summary:

The previous discussion has tried to analyze the need to survey employees and supervisors of the jobs related to the programs offered in the vocational-technical system concerning communication skills competencies for initial employment and for advancement on the job.

Some of the significant reasons for getting input from supervisors in business and industry about on-the-job communication skills competencies have been given. This information is needed by communication departments and individual communication skills teachers to help them determine their course content. Briefly these reasons are as follows:

1. Most colleges and universities do not prepare English teachers to develop course content for communications classes in VTAE institutes.

2. Most communications teachers do not usually come with extensive occupational experience. The practice of heterogenous grouping prevents any communications teacher from possessing the necessary on-the-job work experience in each training program.

3. The advisory committee concept functions adequately for the courses directly related to the program major, however, the general education courses (communication skills) are without meaningful input because they serve all programs.

CHAPTER III

LITERATURE REVIEW

Lucy Crawford (1967), Virginia Polytechnical Institute, Blacksburg, Virginia, conducted a five-year study titled "A Competency Pattern Approach to Curriculum Construction in Distributive Education". This was a very excellent study in competency-based education in distributive education. In this study there were 983 competencies determined necessary to sucessfully work in these occupations. The data for these competencies were obtained through interviews with employees on the job and the supervisors of these employees. These data were then evaluated by paired distributive specialists.

The competencies were then organized into eight areas: advertising, communications, human relations, mathematics, merchandising, operations and management, product and/or service technology and selling. Crawford determined that next to human relations, communications is the most needed group of competencies in developing successful persons for distributive occupations. The communications competencies included skills in speaking (especially on a one-to-one basis), listening, gestures, and writing as applied to use on the job.

According to "Solutions for the Seventies: An Analysis of Competency-Based Learning and Cluster Colleges--A Report of the National Dissemination Project and the Community Colleges," a commitment to the philosophy of "full opportunity" must be made in education (1973). The author, Chuck Weinstock, states that the learning capacity of individuals differs so greatly that our educational institutions must be restructured to meet the needs of individuals. He feels that if the reforms in teaching techniques of the 1960's were indeed reforms, these reforms must be furthered by changes in structure in the 1970's. Patching and repackaging old methods and content is not enough as statistics show that we keep out, drop out, and turn off more people than we graduate. Weinstock also wrote there should be a structure that allows the flexibility and freedom for individuals to grow intellectually and

realize their educational goals. Competency-based learning might be an answer. It is based on the belief that an individual is educated only when he has knowledge and understanding, as well as the values or attitudes which enable and compel him to use this knowledge and understanding. Degrees could then be awarded on the basis of demonstrated and verified competence, not the basis of credit hours accumulated concludes Weinstock.

Regarding the commitment to the philosophy of "full opportunity" as mentioned in the foregoing study, Charles F. Nichols (1970) in "Vocational Education for the Disadvantaged--Seven Years Later" states that "there is really no absolute commitment to vocational-technical education for the disadvantaged -- nationally, regionally, or on the state or local level. Nichols' view is that these students must be managed with techniques different from those who have had the advantages that make it possible for them to succeed in the present school system. As victims of what Nichols calls the "failure syndrome" the disadvantaged students have adapted. Being surrounded by failure in their family, their friends, and their neighborhood, they are much more comfortable with failure than success. Where work has traditionally not existed, there is little achievement motivation. The attitudes of many of the disadvantaged, formulated over a lifetime, cannot be changed quickly. Therefore, the need for supportive services increases rather than decreases if the disadvantaged are to believe in the rewards of work, an attitude that is alien to them.

The Muskegon Area Skill Training Center took attitudinal change into account and devoted the first six months of its program to the improvement of overall employability. The second six months were focused on the preparation for specific employment. Instruction was geared to occupational and practical problems and the classroom learning experiences were related to the daily needs of the students. Teachers kept in mind that students needed to change their basic attitudes toward learning, society, and responsibility. "Helping these kids out of their problems" was the dominant feeling expressed by the staff. Their findings also stated that

people most easily improve upon the abilities that they have strength in:

> ability has an envelope or band like quality and if a persons is in a beneficial environment, for that person, and is given adequate support and nurturance he then will have a greater chance to demonstrate environmental efficiency.

Thus it would seem, the nondisadvantaged must take risks in departing from tradition to help those who never profited from the traditional method. There will be some failures but also some successes as in the Muskegon Area Skill Training Center. And, hopefully, the practical nature of competency-based learning, with competencies determined by the practical job analysis of employee-graduates and supervisors of those graduates, is part of the answer.

Previous research in the communication skills area revealed that similar projects done in Wisconsin were usually limited to a particular VTAE district. State-wide curriculum evaluation surveys involving former students and employers have been completed in Mechanical Design, Electronics, Auto Mechanics, Civil-Highway, Civil-Structural Architectural, and Metals Trades, but these projects concered themselves with a definitive survey of the skills, tasks, and competencies for the curriculum being studied. In these studies, communication skills competencies were surveyed only incidentally. The major concern in each of these surveys was the degree of job proficiency required by employers for specific job-related activities. These surveys were not so concerned with identifying specific communication skills or tasks and, therefore, merely asked how essential it was to be knowledgeable in the broader communicative areas of writing, speaking, listening, or reading.

A study done by Dickerson and Paulsen (1972) analyzed the skills needed by insurance major graduates who had received associate degrees. The study involved 169 insurance companies who were members of the Insurance Company Education Directors Society. All of the firms that responded to the survey agreed with the necessity of a Communications I course. The description of Communications I was: "The course covers an introduction to

modern communications with emphasis placed on language structure, mechanics of style, development of listening skill, and oral communications."

Of the 169 companies surveyed, 35 companies were interviewed personally. The study states that: "Ninety percent of the companies interviewed seemed to be impressed with the curriculum that is being presently offered and felt that as much emphasis as possible should be placed on the communications courses." Communications II was described as: "Designed to improve the student's speaking, reading, writing, and listening skills. Includes writing of business letters, developing a data sheet, and writing reports." This is as definitive as was necessary for this study.

A more definitive study in analyzing general tasks performed by workers in various fields was "Articulation of General Education and Occupational Competencies," at Southwest Wisconsin Vocational-Technical Institute by William K. Wolfe (1973). In producing curriculum in general education courses which is supportive to the major program areas, they created 112 new course outlines, each with a task list of behavioral objectives. The methodology employed took into account "the prescribed occupational competencies demanded by area employment."

Similar studies limited in scope (geographical and/or number of programs) have been completed by communications instructors within the Wisconsin VTAE system. These surveys were usually seminar papers completed in partial fulfillment of the requirements of a master's degree. These studies were most helpful in identifying approaches and procedures that need to be considered when designing and executing the survey of business and industry to determine the importance of communication skills competencies.

Harold Erickson (1967) found a sparcity of research to bring communications programs to a parallel with technical growth. He found that the constantly changing demands of industry had brought about little change in academic areas, mainly English. The distressing factor

herein was that Erickson's responses showed that between 57.2 and 69 percent of the technician's time was spent in communicative skills. The result was a two-semester Communication Skills program for the technician, designed to meet the demands of industry.

Roberta Lewis (1971) conducted "A Study to Determine the Communication Skill Needs of the Vocational Student in the Basic Communications Curriculum." This study included five vocational training programs: auto mechanics, diesel mechanics, machine shop, metal fabrication, and wood technics. The response to 211 questionnaires indicated that reading and listening skills are of the greatest importance to the employees in these areas.

Glen Morgan (1973) studied "Speech Qualification Traits Needed by Marketing Graduates of Lakeshore Technical Institute." This study was limited to ten industries in Manitowoc County. The local industries stated that the graduates of LTI had the needed speech qualifications for success in marketing positions.

David Maurice Radloff (1973) "An Examination to Determine the English Competencies Required of Secretaries in the Administrative, Legal, and Medical Areas with a Synthesis into a Core of Common Competencies to be Used in Forming a Basis for an English Curriculum," conducted a study to determine the English competencies required of secretaries in the Medical, Legal, and Administrative Secretarial areas. He also used the questionnaire/interview method, using 50 questionnaires and 10 interviews in each of the three secretarial areas, distributing them to employers and employee/graduates. His response indicated that "the fundamentals of English like grammar, spelling, and vocabulary are the primary responsibility of the educator." Radloff concluded that "the emphasis on making school 'fun' and avoiding stress on memory, and stress on stress itself . . . seems to be almost 180 degrees off from what the employer wants. Therefore, it is suggested that the long-term happiness and satisfaction derived from successful competition in the world of work is more desirable than the short-

term happiness of a stress-free, noncompetitive educational interlude, and that employability enhancing approaches be stressed."

Everett E. Walde (1973) conducted "A Survey to Determine the Effectiveness of a Communication Skills Course for Trade and Industrial Graduates of a Technical Vocational School." He sent out 221 questionnaires from the District One Technical Vocational School at Eau Claire, Wisconsin, eliciting information from employers and employees on the percentage of their work that required oral or written performance, how many employers required additional training in the communication area, and how the instructional aspect of the course could be changed to better prepare the employee for future work. The results of the survey revealed that over 50% of both groups suggested that more oral and written practice be given to the students at technical-vocational schools. Walde concluded as follows:

1. The major areas of inadequacy reported by the employer and felt by the employee are in writing reports and business letters and in oral presentation of material.

2. Approximately 50% of the respondents are involved in written and oral communication in their present work.

3. Approximately one-third of the employees are required to attend some type of communications class.

4. About 50% of the employees and employers suggested more training be given in the areas of oral speech and reading, mechanics of punctuation and sentence structure, and written work.

This review of literature in 1974 again revealed that the sparcity of research in communications skills as was found by Harold Erickson in 1967.

CHAPTER IV

DESIGN OF THE STUDY

The Proposal

The title of this project is "Developing a List of Competencies for the Communication Skills Area."

The project proposal states the problem as follows:

> At present many communication skills instructors are presenting those competencies that they feel necessary for the graduates to possess. It is important that these communication skills instructors be provided with a compilation of communication skills that the students must possess upon leaving school if they are to be efficient and effective employees.
>
> This project will make a major effort towards determining the communication skill competencies that graduates of the sixteen Wisconsin Vocational, Technical and Adult Education District Institutes should possess.

The project proposal stated that the following seven things would be accomplished:

1. Review the literature
2. Interview communications instructors
3. Develop an instrument which would be sent to program graduates and employers
4. Interview program graduates and employers
5. Analyze the findings from the instrument and interviews
6. Synthesize the results
7. Disseminate the results

Developing An Instrument

Identifying Skills. The most beneficial part of talking to communications instructors throughout the state (beyond realizing their concern for communications as a full-fledged discipline and their ideas about methods and approaches) was the collection of specific communication skills. Some of these skills were mentioned in conversation; however, most of them were obtained from the courses of study and outlines that were being used in the schools that the researchers visited.

Other tasks or skills were found in the following communication skills surveys: (Complete documentation found in Appendix A, p. 79.)

Erickson, Harold P. "An Effective English Program for the Technical School."

Lake, Catherine L. "A Survey of Business, Science, Industry and Research for the Purpose of Ascertaining the Desires and Needs of Potential Employers Relative to Speech Education for the Technician at Oregon Technical Institute."

Lewis, Roberta P. "A Study to Determine the Communication Skill Needs of the Vocational Student in the Basic Communications Curriculum."

Morgan, Glen Michael. "Speech Qualifications Traits Needed by Marketing Graduates of Lakeshore Technical Institute."

Radloff, David. "An Examination to Determine the English Competencies Required of Secretaries in the Administrative, Legal and Medical Areas with a Synthesis into a Core of Common Competencies to be Used in Forming a Basis for an English Curriculum."

Walde, Everett E. "A Survey to Determine the Effectiveness of a Communication Skills Course for Trade and Industrial Graduates of a Technical Vocational School."

Additional tasks or skills were identified by examining the textbooks on speech, communications, composition, rhetoric, reading, listening, and group discussion found in the Instructional Resource Center at Mid-State Technical Institute, Wisconsin Rapids. Another source used for gathering communication skills was a search of approximately 25 documents obtained through a computer scan of the literature related to the study that had been classified in the ERIC system. (These studies and reports are documented in Appendix B, p. 81.)

From the above sources, a list containing over 100 communication skills or tasks was developed. (This list appears in Appendix C, p. 84.) The problems of other surveys dictated that in order to receive significant returns, the number of items on the instrument should not exceed 50. This was to prevent the respondent from becoming discouraged by the length of the survey and then tossing it into the wastebasket.

Another concern was to have each item in the study worded for the least possible misunderstanding. The research team felt that the terminology used to identify the specific communication skills had to be general, but at the same time it had to identify a specific skill. The following procedure was used to identify the skills with minimal ambiguity and also to reduce the total number of skills to approximately forty skills.

1. The Communication Department (four instructors) at Mid-State Technical Institute met three times to reduce the skills to approximately 40. This was done primarily by eliminating duplicate skills and dovetailing related skills into one statement. This group also paid close attention to improving the wording of the statements.

2. A sample questionnaire of the 39 remaining skills was duplicated and field-tested with 20 individuals in different employee and supervisory roles in the communities of Wisconsin Rapids and Stevens Point. These people were asked to criticize the wording, eliminate skills, and add skills to the list.

3. The same sample questionnaire was distributed to every faculty and management team member in Mid-State Vocational, Technical and Adult Education District (about 70). A cover letter (See Appendix D, p. 88) requested that each of them complete the questionnaire from an occupational point of view.

4. A further refinement was completed in two sessions of an ad hoc committee made up of staff members of Mid-State Technical Institute. This committee had representation from each one of the five cluster areas of the survey: Business Technical, Secretarial Science and Related, Industrial Vocational, Health Vocational, and Technology. (Identification of these members is found in Appendix E, p. 93.)

5. A final approval was received from Mr. Roland Krogstad, Educational Consultant, State VTAE Board.

The final 40-item survey resulting from the procedures outlined above is found in Appendix F, p. 95. It will be noted that a Likert scale was used to determine the degree of importance of the 40 communication skills. Both employers and VTAE graduates of these programs were included in the state-wide survey. This necessitated that different cover letters accompany the surveys, different identifying labels be used in the upper right-hand corner of the surveys and that two different sets of instructions be developed.

A copy of the cover letter and questionnaire sent to supervisors (employers) is in Appendix F, p. 95. A copy of the cover letter and questionnaire sent to VTAE graduates is in Appendix G, p. 101.

For those who did not reply to the first mailing, a second cover letter and questionnaire was distributed. The questionnaires for the first and the second mailings were identified. The cover letters for both first and second mailings were identical with the exception that the cover letter on the second mailing contained a small rectangular box in the upper right hand corner which contained to the words "Help! We Need Your Response to Make Communication Courses RELEVANT." This rectangle and words within the rectangle were red in color. (See Appendix H, p. 107.)

PROGRAMS SURVEYED

At the same time that the communication skills to be studied in the survey were being determined through the process described in the previous section, it was necessary to determine which programs offered throughout the Wisconsin VTAE system were to be surveyed and how these programs would be clustered.

Sampling VTAE graduates and employers of VTAE graduates for all the programs offered in the state VTAE system in order to develop a list of communication skills competencies would be difficult. The resources allotted to the project did not enable a comprehensive sampling for all the designated programs. Associate degree programs, and vocational diploma programs offered in the Wisconsin VTAE system total slightly over 250.

Because this was to be a state-wide survey (sampling VTAE graduates and employers from all 16 districts by mail and personal interview) it was felt that two criteria were of utmost importance in determining which programs to be surveyed:

1. The programs surveyed would have to be offered in at least 5 of the 16 districts.
2. The programs would have to be occupationally related so they could be clustered.

By applying the above two criteria, five clusters of instruction containing a total of 25 programs remained.

A primary consideration in the final reducation was whether meaningful responses could be received from a mailed questionnaire. The final clustering included major instructional divisions--Office and Distribution, Secretarial, Industrial Machine, Health, and Industrial Technology--and also maintained at least two programs and no more than four programs in any of the final five clusters to be surveyed. A total of 15 programs would be surveyed. The 15 clustered programs that were to be included in this survey are as follows:

BUSINESS CLUSTER

10-101 Accounting
10-107 Business Data Processing
10-104 Marketing

SECRETARIAL CLUSTER

31-106 Clerk Typist
31-106 Stenographer
10-106 Secretarial Science

INDUSTRIAL MACHINE CLUSTER

31-421 Mechanical Drafting
32-421 Mechanical Drafting
31-420 Machine Tool Operation
32-420 Machine Tool Operation

HEALTH CLUSTER

31-510 Practical Nursing
31-509 Medical Assistant
31-512 Operating Room Assistant

INDUSTRIAL TECHNOLOGY CLUSTER

10-605 Electronic Technology
10-606 Mechanical Design

TYPE AND SIZE OF SAMPLE

It was decided to randomly sample both VTAE graduates and employers of VTAE graduates of each of the 15 programs being surveyed. Approximately 35-50 supervisors and 35-50 VTAE graduates were randomly selected for each of the 15 programs. It was felt that a minimum of 20 responses per program within each response group--VTAE graduates and employers--was necessary to insure meaningful results. Also, it was felt that the 35-50 sample size would result in the 20 responses per cell.

When a VTAE district in the state VTAE system is designated to conduct a state-wide survey, the names and addresses of VTAE graduates and the names and addresses of employers are obtained from each of the sixteen districts through a letter from the Wisconsin VTAE Director.

For this study, the letter sent by the state board to each of the sixteen districts identified the project, explained its intent, and requested two things:

1. The names and addresses of graduating students from June, 1973.
2. Follow-up Reports for 1972 and/or 1973.

Every district did not offer each of the 15 programs to be surveyed; therefore, accompanying the letter to each district was a sheet listing the 15 programs and specifying the number of names and addresses needed for those programs offered in that district.

CHAPTER V

RESULTS OF THE STUDY

Upon receiving the names and addresses of VTAE graduates, it became evident that there were not enough graduates of Mechanical Drafting II to study the Mechanical Drafting II Program. It appears that the student who would determine to pursue the Mechanical Drafting II vocational diploma program instead elects to pursue the Associate Degree Mechanical Design Program. This reduced the number of programs studied from 15 to 14. Also, because employers (supervisors) of Machine Tool I and Machine Tool II Program graduates would have found it extremely difficult to determine any real difference in the needs for communication skills between Machine Tool I and Machine Tool II VTAE graduates, this data was combined from the supervisors (employers) of Machine Tool I and Machine Tool II VTAE graduates.

Table 1, on the following page, presents the number of instruments sent and the number and percent of instruments returned.

Table 2, p. 24, presents the rank order and mean response for each of the forty communication skills competencies within programs and program clusters according to the responses of VTAE graduates.

Table 3, p. 25, presents the rank order and mean response for each of the forty communication skills competencies within programs and program clusters according to responses of supervisors (employers).

Tables 4 through 16, pp. 27 to 39, present in rank order the mean response for each of the forty communication skills competencies within the 13-program areas (Note: Machine Tool I and Machine Tool II were combined) as determined by employers.

Tables 17 through 30, pp. 41 to 54, present in rank order the mean response for each of the forty competencies within the 14-program areas as determined by VTAE graduates.

Table 1

NUMBER OF INSTRUMENTS SENT AND
NUMBER AND PERCENT OF INSTRUMENTS RETURNED

	EMPLOYERS			EMPLOYEES		
	No. Sent	Returned	%	No. Sent	Returned	%
BUSINESS TECH CLUSTER	155	117	75%	128	106	83%
Accounting	59	40	68%	48	35	73%
Data Processing	44	42	95%	36	32	89%
Marketing	52	35	67%	44	39	89%
SECRETARIAL SCIENCE & RELATED CLUSTER	136	94	69%	131	98	75%
Clerk-Typist	53	34	64%	48	38	79%
Stenographer	36	33	92%	38	27	71%
Secretarial Science	47	27	57%	45	33	73%
INDUSTRIAL CLUSTER	145	77	53%	138	51	37%
Mechanical Drafting I	66	39	59%	58	18	31%
Machine Tool I & II Combined	79	38	48%	-	-	-
Machine Tool I	-	-	-	40	19	48%
Machine Tool II	-	-	-	39	13	33%
HEALTH-VOC CLUSTER	127	79	62%	96	64	67%
Practical Nursing	39	31	79%	29	21	72%
Medical Assistant	55	25	45%	33	24	73%
Operating Room Assistant	33	23	70%	34	19	56%
TECHNOLOGIES CLUSTER	76	56	74%	91	63	69%
Mechanical Design	40	28	70%	43	28	65%
Electronic Technology	36	28	78%	48	35	73%

A study of Table 2 and Table 3 reveals that within programs VTAE graduates and employers responded very similarly, as both groups gave high ranks to similar competencies and low ranks to similar competencies. Also by comparing ranks and mean responses within competencies and between programs, it becomes apparent that for purposes of instruction in communication skills it is possible to cluster programs.

Table 2

RANK ORDER AND MEAN RESPONSE OF THE FORTY COMMUNICATION SKILLS COMPETENCIES WITHIN PROGRAMS AND PROGRAM CLUSTERS ACCORDING TO RESPONSES OF VTAE GRADUATES

THE FOURTEEN PROGRAMS AND FIVE PROGRAM CLUSTERS

COMPETENCIES	10-101 Accounting (n = 39)	10-107 Data Processing (n = 32)	10-104 Marketing (n = 39)	Office and Distribution Cluster	31-106 Clerk Typist (n = 38)	31-106 Stenographer (n = 77)	10-138 Secretarial Science (n = 35)	Secretarial Cluster	31-403 Mechanical Drafting (n = 18)	53-429 Machine Tool Operation (n = 13)	31-429 Machine Tool Operation (n = 19)	Industrial Machine Cluster	31-310 Practical Nursing (n = 21)	31-309 Medical A (n = 24)	31
Adapt written word usage to the job situation	(16)* 3.66**	(18) 3.28	(23) 3.41	(20) 3.45	(21) 3.37	(19) 3.74	(14.5) 4.00	(20.5) 3.70	(26) 2.94	(18.5) 2.74	(14.5) 2.92	(18) 2.87	(7.5) 4.52	(21.5) 3.42	(18) 3.21
Adapt spoken word usage to the job situation	(8) 3.77	(11) [illegible]	(5.5) 4.38	(9) 4.13	(13) 3.79	(11.5) 4.07	(19.5) 3.73	(14) 3.86	(16) 3.44	(8) 3.47	(10) 3.46	(11) 3.46	(3) 4.71	(15.5) 3.92	(10.5) 4.00
Use the voice effectively and pronunciation of words correctly	(17) 3.59	(19) 3.25	(11) 4.23	(15.5) 3.69	(10) 4.00	(18) 3.85	(16.5) 3.88	(12) 3.91	(21.5) 3.17	(16.5) 2.84	(17.5) 2.62	(17) 2.88	(12) 4.33	(6.5) 4.50	(12) 3.8
Maintain confidentiality concerning job-related information	(2) 4.49	(9.5) 3.94	(12) 4.15	(8) 4.19	(14) 3.71	(7.5) 4.37	(8) 4.27	(10) 4.12	(23) 3.12	(23) 2.44	(22) 2.38	(22) 2.65	(1) 4.86	(2) 4.67	(1) 4.8
Use the telephone effectively	(12.5) 3.96	(21.5) 3.19	(14) 4.10	(13.5) 3.74	(2) 4.42	(7.5) 4.37	(13) 4.12	(6) 4.30	(26) 2.94	(25) 2.05	(30) 1.77	(26) 2.25	(20.5) 3.90	(9) 4.38	(21) 2.9
Respond to non-verbal communication (body language)	(36) 2.66	(37) 2.25	(33.5) 2.79	(37) 2.50	(30) 2.50	(30) 2.59	(33) 2.26	(30) 2.64	(34) 2.11	(27.5) 1.79	(30) 1.77	(33) 1.89	(10) 4.38	(25) 3.13	(9) 4.2
Complete job-related forms (Applications, purchase requisitions, invoices, sales receipts, orders)	(12.5) 3.94	(24.5) 3.08	(1) 4.49	(12) 3.82	(15.5) 3.68	(15.5) 3.96	(19.5) 3.73	(17) 3.79	(17.5) 3.33	(22) 2.47	(20.5) 2.46	(20) 2.75	(27) 3.48	(20) 3.52	(23. 2.4
Handle receptions and introductions competently	(27) 3.14	(29) 2.78	(20.5) 3.50	(26) 3.14	(23) 3.16	(20) 3.70	(23) 3.33	(22) 3.40	(31) 2.61	(31) 1.74	(25.5) 2.00	(29) 2.15	(31.5) 3.14	(17) 3.88	(26. 2.2
Remember essential information	(1) 4.66	(2) 4.50	(5.5) 4.38	(1) 4.51	(1) 4.50	(4.5) 4.44	(5) 4.33	(4) 4.42	(5) 4.28	(1) 4.42	(3.5) 4.15	(3) 4.28	(5.5) 4.62	(1) 4.75	(7) 4.5
Take notes effectively	(23.5) 3.37	(20) 3.22	(20.5) 3.50	(23.5) 3.36	(15.5) 3.68	(17) 3.93	(18) 3.79	(16) 3.80	(21.5) 3.17	(20.5) 2.53	(23) 2.23	(23) 2.64	(22) 3.86	(19) 3.54	(28 2.1
Write a business letter	(29) 2.97	(30) 2.22	(32) 2.86	(33) 2.67	(22) 3.24	(22.5) 3.48	(23) 3.42	(23) 3.38	(36.5) 1.89	(37.5) 1.37	(36.5) 1.31	(36) 1.52	(39) 2.05	(32) 2.33	(39. 1.3
Use abbreviations and numbers in report writing	(19.5) 3.53	(28) 2.88	(30.5) 2.92	(27) 3.11	(25) 3.03	(27) 2.85	(26.5) 3.12	(26) 3.00	(28) 2.89	(24) 2.16	(33.5) 1.62	(28) 2.22	(25) 3.71	(26) 3.08	(26. 2.2
Give instructions orally	(22) 3.43	(13) 3.69	(13) 4.11	(13.5) 3.74	(24) 3.13	(25) 3.00	(28) 2.97	(25) 3.03	(11.5) 3.67	(10.5) 3.37	(11) 3.31	(12) 3.45	(14) 4.24	(12) 4.25	(10 4.0
Understand oral instructions	(6) 4.23	(3) 4.44	(6) 4.39	(3) 4.35	(5.5) 4.32	(3) 4.56	(3) 4.36	(5) 4.41	(1) 4.50	(2.5) 4.26	(3.5) 4.15	(1.5) 4.30	(4) 4.67	(3.5) 4.58	(3. 4.7
Interpret and explain graphic illustrations (graphs, charts, tables)	(28) 3.00	(26.5) 3.03	(35.5) 2.74	(28) 2.93	(32.5) 2.11	(34) 1.93	(31) 2.36	(33) 2.13	(17.5) 3.33	(13.5) 3.00	(2) 4.23	(10) 3.52	(23) 3.81	(31) 2.43	(35 1.5
Proofread and edit written communications	(31.5) 2.83	(33) 2.56	(37) 2.61	(34) 2.62	(19) 3.63	(22.5) 3.48	(14.5) 4.00	(20.5) 3.70	(29) 2.78	(40) 1.32	(27.5) 1.92	(32) 2.01	(34) 2.76	(30) 2.50	(37 1.4
Write a general report	(31.5) 2.83	(32) 2.59	(38) 2.45	(32) 2.68	(34) 2.05	(33) 2.07	(32) 2.30	(32) 2.14	(36.5) 1.89	(35.5) 1.42	(33.5) 1.62	(36) 1.64	(33) 2.9[illegible]	(38) 1.6[illegible]	(35 1.5
Work cooperatively with other employees	(3.5) 4.37	(1) 4.56	(2) 4.47	(2) 4.47	(4) 4.37	(1) 4.74	(7) 4.30	(2) 4.47	(3) 4.33	(2.5) 4.26	(1) 4.31	(2.5) 4.30	(5.5) 4.62	(2.5) 4.58	(5) 4.6
Organize and lead a conference	(37) 2.34	(34.5) 2.50	(27.5) 3.00	(35) 2.61	(37.5) 1.76	(39) 1.31	(38) 1.67	(39) 1.58	(38) 1.83	(34) 1.58	(35) 1.46	(37) 1.62	(37) 2.48	(39) 1.52	(32 1.9
Question individuals to clarify information	(14) 3.80	(8) 4.06	(15) 4.00	(11) 3.95	(12) 3.86	(13) 4.04	(21) 3.55	(15) 3.81	(8.5) 3.94	(16.5) 2.84	(12.5) 3.23	(13) 3.34	(17) 4.14	(15.5) 3.92	(16 3.1
Use Grammar correctly	(25.5) 3.31	(15.5) 3.44	(16) 3.97	(18) 3.57	(7) 4.16	(11.5) 4.07	(5) 4.33	(9) 4.17	(20) 3.22	(18.5) 2.74	(24) 2.08	(21) (2.68	(20.5) 3.90	(10) 4.33	(13 3.1
Spell correctly	(18) 3.57	(17) 3.31	(18) 3.79	(19) 3.56	(5.5) 4.32	(2) 4.59	(1) 4.67	(1) 4.53	(14.5) 3.61	(20.5) 2.53	(19) 2.54	(19) 2.89	(10) 4.38	(6.5) 4.50	(15 3.4
Punctuate	(30) 2.86	(36) 2.44	(29) 2.97	(31) 2.76	(17.5) 3.58	(15.5) 3.96	(11.5) 4.15	(13) 3.90	(31) 2.61	(33) 1.63	(25.5) 2.00	(31) 2.08	(31.5) 3.14	(23) 3.29	(22 2.4
Express ideas clearly and concisely	(11) 4.00	(7) 4.19	(3) 4.42	(7) 4.20	(17.5) 3.58	(21) 3.54	(11.5) 4.15	(19) 3.76	(6) 4.29	(9) 3.42	(7.5) 3.62	(6.5) 3.78	(13.5) 4.19	(14) 4.00	(14) 3.7
Present technical data orally	(19.5) 3.53	(14) 3.48	(24) 3.22	(21.5) 3.41	(31) 2.39	(31) 2.15	(30) 2.61	(31) 2.35	(14.5) 3.61	(15) 2.89	(14.5) 2.92	(14) 3.14	(30) 3.24	(24) 3.21	(23. 2.4
Read to comprehend job-related and technical materials	(15) 3.71	(9.5) 3.94	(22) 3.43	(15.5) 3.69	(26.5) 2.82	(28) 2.81	(25) 3.15	(28) 2.93	(10) 3.78	(10.5) 3.37	(9) 3.54	(9) 3.56	(15.5) 4.19	(21.5) 3.42	(16) 3.2
Lead a problem-solving or informational discussion group	(38) 2.32	(31) 2.63	(33.5) 2.79	(36) 2.58	(39) 1.74	(40) 1.27	(39.5) 1.58	(40) 1.53	(35) 2.00	(27.5) 1.79	(32) 1.69	(34) 1.83	(35) 2.71	(37) 1.65	(34) 1.5
Participate in a problem-solving or informational discussion group	(34) 2.74	(26) 3.00	(30.5) 2.92	(29) 2.89	(36) 1.87	(35) 1.88	(35) 2.06	(35) 1.94	(33) 2.50	(26) 1.84	(20.5) 2.46	(25) 2.27	(26) 3.52	(35) 1.88	(29) 2.1
Listen for main ideas	(21) 3.44	(15.5) 3.44	(17) 3.95	(17) 3.61	(28) 2.79	(26) 2.92	(26.5) 3.12	(27) 2.94	(19) 3.28	(12) 3.26	(16) 2.77	(15) 3.10	(19) 4.00	(27) 2.96	(18) 3.2
Prepare written work neatly	(9) 4.11	(27) 2.94	(26) 3.18	(21.5) 3.41	(11) 3.97	(10) 4.12	(9) 4.18	(11) 4.09	(8.5) 3.94	(31) 1.74	(30) 1.77	(24) 2.48	(25) 3.43	(18) 3.79	(30) 2.0
Skim for pertinent information	(25.5) 3.31	(23) 3.13	(25) 3.21	(25) 3.22	(26.5) 2.82	(24) 3.04	(24) 3.30	(24) 3.05	(31) 2.61	(31) 1.74	(27.5) 1.92	(30) 2.09	(29) 3.38	(29) 2.58	(25) 2.3
Lead and participate in a business meeting (Parliamentary procedure)	(40) 2.00	(40) 2.00	(39) 2.37	(40) 2.12	(40) 1.66	(38) 1.58	(39.5) 1.58	(38) 1.61	(39) 1.56	(37.5) 1.37	(39) 1.15	(40) 1.33	(40) 2.00	(40) 1.42	(39) 1.3
Understand occupational terminology	(3.5) 4.37	(4) 4.31	(9.5) 4.29	(4) 4.32	(20) 3.42	(14) 4.00	(16.5) 3.88	(10) 3.77	(6) 4.22	(4) 4.16	(5) 3.92	(4) 4.10	(2) 4.81	(5) 4.54	(3. 4.7
Read aloud effectively	(39) 2.03	(39) 2.03	(35.5) 2.74	(39) 2.27	(32.5) 2.11	(32) 2.12	(34) 2.09	(34) 2.11	(40) 1.50	(35.5) 1.42	(36) 1.23	(39) 1.38	(38) 2.24	(33) 2.22	(32) 1.8
Recognize fact from opinion	(23.5) 3.37	(21.5) 3.19	(19) 3.53	(23.5) 3.36	(29) 2.74	(29) 2.73	(29) 2.85	(29) 2.77	(26) 2.94	(13.5) 3.00	(17.5) 2.62	(19) 2.85	(18) 4.10	(28) 2.74	(20 3.1
Listen tactfully	(10) 4.09	(12) 3.75	(9.5) 4.29	(10) 4.04	(9) 4.11	(6) 4.38	(10) 4.16	(8) 4.22	(11.5) 3.67	(5) 4.05	(7.5) 3.62	(6.5) 3.78	(7.5) 4.52	(11) 4.29	(2) 4.7
Give attention to details	(7) 4.21	(5.5) 4.25	(8) 4.31	(6) 4.26	(8) 4.14	(9) 4.22	(5) 4.33	(7) 4.23	(2) 4.39	(6) 3.94	(6) 3.85	(5) 4.06	(10) 4.38	(13) 4.04	(8) 4.5
Adjust to a variable work load	(5) 4.26	(5.5) 4.25	(7) 4.33	(5) 4.28	(3) 4.39	(4.5) 4.44	(2) 4.55	(3) 4.46	(7) 4.00	(7) 3.67	(12.5) 3.23	(8) 3.63	(13) 4.29	(8) 4.46	(6) 4.6
Participate in a conference	(33) [illegible]	(30) [illegible]	(27.5) 3.00	(30) [illegible]	(37.5) 1.76	(36) 1.85	(36) 1.82	(36) 1.86	(13) 3.44	(29) 1.78	(36.5) 1.31	(27) 2.24	(24) 3.38	(34) 1.88	(30 2.6

Table 2

RANK ORDER AND MEAN RESPONSE OF THE FORTY COMMUNICATION SKILLS COMPETENCIES WITHIN PROGRAMS AND PROGRAM CLUSTERS ACCORDING TO RESPONSES OF VTAE GRADUATES

THE FOURTEEN PROGRAMS AND FIVE PROGRAM CLUSTERS

	10-108 Accounting (n = 35)	10-107 Data Processing (n = 32)	10-104 Marketing (n = 39)	Office and Distribution Cluster	31-106 Clerk Typist (n = 38)	31-106 Stenographer (n = 27)	10-106 Secretarial Science (n = 33)	Secretarial Cluster	31-421 Mechanical Drafting (n = 18)	31-420 Machine Tool Operation (n = 19)	31-420 Machine Tool Operation (n = 19)	Industrial Machine Cluster	31-510 Practical Nursing (n = 21)	31-509 Medical Assistant (n = 24)	31-512 Operating Room Assistant (n = 19)	Health Cluster	10-405 Electronics (n = 35)	10-406 Mechanical Design (n = 28)	Industrial Technology Cluster
	(16)* 3.66**	(18) 3.28	(23) 3.41	(20) 3.45	(21) 3.37	(19) 3.74	(14.5) 4.00	(20.5) 3.70	(26) 2.94	(18.5) 2.74	(14.5) 2.92	(18) 2.87	(7.5) 4.52	(21.5) 3.42	(18) 3.21	(18) 3.72	(18) 3.49	(24.5) 3.11	(22) 3.30
	(8) 4.17	(11) 3.86	(5.5) 4.38	(9) 4.13	(13) 3.79	(11.5) 4.07	(19.5) 3.73	(14) 3.86	(16) 3.44	(8) 3.47	(10) 3.46	(11) 3.46	(3) 4.71	(15.5) 3.92	(10.5) 4.00	(10) 4.21	(9) 3.97	(11.5) 3.86	(9) 3.92
ly	(17) 3.59	(19) 3.25	(11) 4.23	(15.5) 3.69	(10) 4.00	(18) 3.85	(16.5) 3.88	(12) 3.91	(21.5) 3.17	(16.5) 2.84	(17.5) 2.62	(17) 2.88	(12) 4.33	(6.5) 4.50	(12) 3.89	(9) 4.24	(15.5) 3.66	(23) 3.21	(18) 3.44
	(2) 4.49	(9.5) 3.94	(12) 4.15	(8) 4.19	(14) 3.71	(7.5) 4.37	(8) 4.27	(10) 4.12	(23) 3.12	(23) 2.44	(22) 2.38	(22) 2.65	(1) 4.86	(2) 4.67	(1) 4.84	(1) 4.79	(24.5) 3.20	(22) 3.26	(24) 3.23
	(12.5) 3.94	(21.5) 3.19	(14) 4.10	(13.5) 3.74	(2) 4.42	(7.5) 4.37	(13) 4.12	(6) 4.30	(26) 2.94	(25) 2.05	(30) 1.77	(26) 2.25	(20.5) 3.90	(9) 4.38	(21) 2.95	(17) 3.74	(26.5) 3.14	(24.5) 3.11	(27) 3.13
	(36) 2.46	(37) 2.25	(33.5) 2.79	(37) 2.50	(30) 2.90	(30) 2.59	(33) 2.24	(30) 2.44	(34) 2.11	(27.5) 1.79	(30) 1.77	(33) 1.89	(10) 4.38	(25) 3.13	(9) 4.26	(15) 3.92	(38) 2.11	(38) 2.07	(38) 2.09
tions,	(12.5) 3.94	(34.5) 3.08	(1) 4.49	(12) 3.82	(15.5) 3.68	(15.5) 3.96	(19.5) 3.73	(17) 3.79	(17.5) 3.33	(22) 2.47	(20.5) 2.46	(20) 2.75	(27) 3.48	(20) 3.52	(23.5) 2.47	(23) 3.16	(15.5) 3.66	(18) 3.50	(16) 3.58
	(27) 3.14	(29) 2.78	(20.5) 3.50	(26) 3.14	(23) 3.16	(20) 3.70	(23) 3.33	(22) 3.40	(31) 2.61	(31) 1.74	(25.5) 2.00	(29) 2.15	(31.5) 3.14	(17) 3.88	(26.5) 2.21	(25) 3.08	(28) 2.91	(30) 2.57	(30) 2.74
	(1) 4.66	(2) 4.50	(5.5) 4.38	(1) 4.51	(1) 4.50	(4.5) 4.44	(5) 4.33	(4) 4.42	(5) 4.28	(1) 4.42	(3.5) 4.15	(3) 4.28	(5.5) 4.62	(1) 4.75	(7) 4.58	(4) 4.65	(2) 4.51	(3.5) 4.29	(2) 4.40
	(23.5) 3.37	(20) 3.22	(30.5) 3.50	(23.5) 3.36	(15.5) 3.68	(17) 3.93	(18) 3.79	(16) 3.80	(21.5) 3.17	(20.5) 2.53	(23) 2.23	(23) 2.64	(22) 3.86	(19) 3.54	(28) 2.17	(22) 3.19	(23) 3.29	(26) 3.07	(26) 3.18
	(29) 2.97	(38) 2.22	(32) 2.86	(33) 2.67	(22) 3.24	(22.5) 3.48	(22) 3.42	(23) 3.38	(36.5) 1.89	(37.5) 1.37	(36.5) 1.31	(38) 1.52	(39) 2.05	(32) 2.33	(39.5) 1.37	(39) 1.92	(35) 2.29	(36) 2.25	(35) 2.27
	(19.5) 3.53	(28) 2.88	(30.5) 2.92	(27) 3.11	(25) 3.03	(27) 2.85	(26.5) 3.12	(26) 3.00	(28) 2.89	(24) 2.16	(33.5) 1.62	(28) 2.22	(25) 3.71	(26) 3.08	(26.5) 2.21	(26.5) 3.00	(30) 2.74	(31.5) 2.54	(31) 2.64
	(22) 3.43	(13) 3.69	(13) 4.11	(13.5) 3.74	(26) 3.13	(25) 3.00	(28) 2.97	(25) 3.03	(11.5) 3.67	(10.5) 3.37	(11) 3.31	(12) 3.45	(14) 4.24	(12) 4.25	(10.5) 4.00	(11) 4.16	(11) 3.74	(16.5) 3.57	(15) 3.66
	(6) 4.25	(3) 4.44	(4) 4.39	(3) 4.35	(5.5) 4.32	(3) 4.56	(3) 4.36	(5) 4.41	(1) 4.50	(2.5) 4.26	(3.5) 4.15	(1.5) 4.30	(4) 4.67	(3.5) 4.58	(3.5) 4.74	(3) 4.66	(5) 4.20	(2) 4.48	(4) 4.32
ubles)	(28) 3.09	(26.5) 3.03	(35.5) 2.74	(28) 2.93	(32.5) 2.11	(34) 1.93	(31) 2.36	(33) 2.13	(17.5) 3.33	(13.5) 3.00	(2) 4.23	(10) 3.52	(23) 3.81	(31) 2.43	(35.5) 1.53	(30) 2.59	(13) 3.71	(10) 3.89	(11.5) 3.80
	(31.5) 2.83	(33) 2.56	(37) 2.61	(34) 2.62	(19) 3.63	(22.5) 3.48	(14.5) 4.00	(20.5) 3.70	(29) 2.78	(40) 1.32	(27.5) 1.92	(32) 2.01	(34) 2.76	(30) 2.50	(37.5) 1.47	(33) 2.24	(36) 2.21	(35) 2.26	(36.5) 2.24
	(31.5) 2.83	(32) 2.59	(38) 2.45	(32) 2.68	(34) 2.05	(33) 2.07	(32) 2.30	(32) 2.14	(36.5) 1.89	(35.5) 1.42	(33.5) 1.62	(36) 1.64	(33) 2.95	(38) 1.61	(35.5) 1.53	(35) 2.03	(33) 2.60	(31.5) 2.54	(33) 2.57
	(3.5) 4.37	(1) 4.56	(2) 4.47	(2) 4.47	(4) 4.37	(1) 4.74	(7) 4.30	(2) 4.47	(3) 4.33	(2.5) 4.26	(1) 4.31	(1.5) 4.30	(5.5) 4.62	(3.5) 4.58	(5) 4.68	(5) 4.63	(4) 4.29	(1) 4.46	(3) 4.38
	(37) 2.34	(34.5) 2.50	(27.5) 3.00	(35) 2.61	(37.5) 1.76	(39) 1.31	(38) 1.67	(39) 1.58	(38) 1.83	(34) 1.58	(35) 1.46	(37) 1.62	(37) 2.48	(37) 1.52	(32.5) 1.84	(38) 1.95	(37) 2.12	(34) 2.36	(36.5) 2.24
	(14) 3.80	(8) 4.06	(15) 4.00	(11) 3.95	(12) 3.84	(13) 4.04	(21) 3.55	(15) 3.81	(8.5) 3.94	(16.5) 2.84	(12.5) 3.23	(13) 3.34	(17) 4.14	(15.5) 3.92	(18) 3.21	(16) 3.76	(13) 3.71	(9) 3.93	(10) 3.82
	(25.5) 3.31	(15.5) 3.44	(16) 3.97	(18) 3.57	(7) 4.16	(11.5) 4.07	(5) 4.33	(9) 4.19	(20) 3.22	(18.5) 2.74	(24) 2.08	(21) (2.68	(20.5) 3.90	(10) 4.33	(13) 3.79	(13) 4.01	(22) 3.31	(21) 3.32	(21) 3.32
	(18) 3.57	(17) 3.31	(18) 3.79	(19) 3.56	(5.5) 4.32	(2) 4.59	(1) 4.67	(1) 4.53	(14.5) 3.61	(20.5) 2.53	(19) 2.54	(16) 2.89	(10) 4.38	(6.5) 4.50	(15) 3.53	(12) 4.14	(21) 3.32	(13.5) 3.79	(17) 3.56
	(30) 2.86	(36) 2.44	(29) 2.97	(31) 2.76	(17.5) 3.58	(15.5) 3.96	(11.5) 4.15	(13) 3.90	(31) 2.61	(33) 1.63	(25.5) 2.00	(31) 2.08	(31.5) 3.14	(23) 3.29	(22) 2.56	(26.5) 3.00	(32) 2.69	(33) 2.46	(32) 2.58
	(11) 4.00	(7) 4.19	(3) 4.42	(7) 4.20	(17.5) 3.58	(21) 3.54	(11.5) 4.15	(19) 3.76	(4) 4.29	(9) 3.42	(7.5) 3.62	(6.5) 3.78	(15.5) 4.19	(14) 4.00	(14) 3.74	(14) 3.93	(6) 4.18	(5.5) 4.25	(5) 4.22
	(19.5) 3.53	(14) 3.48	(24) 3.22	(21.5) 3.41	(31) 2.29	(31) 2.15	(30) 2.61	(31) 2.35	(14.5) 3.61	(15) 2.89	(14.5) 2.92	(14) 3.14	(30) 3.24	(24) 3.21	(23.5) 2.47	(28) 2.97	(10) 3.80	(15) 3.64	(14) 3.72
	(15) 3.71	(9.5) 3.94	(22) 3.43	(15.5) 3.69	(26.5) 2.82	(28) 2.81	(25) 3.15	(28) 2.93	(10) 3.78	(10.5) 3.37	(9) 3.54	(9) 3.56	(15.5) 4.19	(21.5) 3.42	(16) 3.28	(19) 3.63	(3) 4.34	(13.5) 3.79	(7) 4.07
	(38) 2.32	(31) 2.63	(33.5) 2.79	(36) 2.58	(39) 1.74	(40) 1.27	(39.5) 1.58	(40) 1.53	(35) 2.00	(27.5) 1.79	(32) 1.69	(34) 1.83	(35) 2.71	(37) 1.65	(34) 1.58	(36) 1.98	(29) 2.82	(29) 2.68	(29) 2.75
n group	(34) 2.74	(26) 3.00	(30.5) 2.92	(29) 2.89	(36) 1.87	(35) 1.88	(35) 2.06	(35) 1.94	(33) 2.50	(26) 1.84	(20.5) 2.46	(25) 2.27	(26) 3.52	(35) 1.83	(29) 2.11	(32) 2.49	(20) 3.34	(19.5) 3.36	(20) 3.35
	(21) 3.44	(15.5) 3.44	(17) 3.95	(17) 3.61	(28) 2.79	(26) 2.92	(26.5) 3.12	(27) 2.94	(19) 3.28	(12) 3.26	(16) 2.77	(15) 3.10	(19) 4.00	(27) 2.96	(18) 3.21	(20) 3.39	(17) 3.60	(7.5) 4.00	(11.5) 3.80
	(9) 4.11	(27) 2.94	(26) 3.18	(21.5) 3.41	(11) 3.97	(10) 4.12	(9) 4.18	(11) 4.09	(8.5) 3.94	(31) 1.74	(30) 1.77	(24) 2.48	(28) 3.43	(18) 3.79	(30.5) 2.05	(24) 3.09	(26.5) 3.14	(19.5) 3.36	(23) 3.25
	(25.5) 3.31	(23) 3.13	(25) 3.21	(25) 3.22	(26.5) 2.82	(24) 3.04	(24) 3.30	(24) 3.05	(31) 2.61	(31) 1.74	(27.5) 1.92	(30) 2.09	(29) 3.38	(29) 2.58	(25) 2.32	(29) 2.76	(19) 3.40	(27) 3.00	(25) 3.20
procedure)	(40) 2.00	(40) 2.00	(39) 2.37	(40) 2.12	(40) 1.66	(38) 1.58	(39.5) 1.58	(38) 1.61	(39) 1.56	(37.5) 1.37	(39) 1.15	(40) 1.83	(40) 2.00	(40) 1.43	(39.5) 1.37	(40) 1.60	(40) 1.82	(39) 1.93	(40) 1.88
	(3.5) 4.37	(4) 4.31	(9.5) 4.29	(4) 4.32	(20) 3.42	(14) 4.00	(16.5) 3.88	(18) 3.77	(6) 4.22	(4) 4.16	(5) 3.92	(4) 4.10	(2) 4.81	(5) 4.54	(3.5) 4.74	(2) 4.70	(1) 4.57	(3.5) 4.29	(1) 4.43
	(39) 2.03	(39) 2.03	(35.5) 2.74	(39) 2.27	(32.5) 2.11	(32) 2.12	(34) 2.09	(34) 2.11	(40) 1.50	(35.5) 1.42	(38) 1.23	(39) 1.38	(38) 2.24	(33) 2.22	(32.5) 1.84	(34) 2.10	(39) 2.03	(40) 1.82	(39) 1.93
	(23.5) 3.37	(21.5) 3.19	(19) 3.53	(23.5) 3.36	(29) 2.74	(29) 2.73	(29) 2.85	(29) 2.77	(26) 2.94	(13.5) 3.00	(17.5) 2.62	(19) 2.85	(18) 4.10	(28) 2.74	(20) 3.11	(21) 3.32	(24.5) 3.20	(16.5) 3.57	(19) 3.39
	(10) 4.09	(12) 3.75	(9.5) 4.29	(10) 4.04	(9) 4.11	(6) 4.38	(10) 4.16	(8) 4.22	(11.5) 3.67	(5) 4.05	(7.5) 3.62	(6.5) 3.78	(7.5) 4.52	(11) 4.29	(2) 4.79	(6) 4.53	(13) 3.71	(11.5) 3.86	(13) 3.79
	(7) 4.21	(5.5) 4.25	(8) 4.31	(6) 4.26	(8) 4.14	(9) 4.22	(5) 4.33	(7) 4.23	(2) 4.39	(6) 3.94	(6) 3.85	(5) 4.06	(10) 4.38	(13) 4.04	(8) 4.53	(8) 4.32	(7) 4.11	(5.5) 4.25	(6) 4.18
	(5) 4.26	(5.5) 4.25	(7) 4.33	(5) 4.28	(3) 4.39	(4.5) 4.44	(2) 4.55	(3) 4.46	(7) 4.00	(7) 3.67	(12.5) 3.23	(8) 3.63	(13) 4.29	(8) 4.46	(6) 4.63	(7) 4.46	(8) 4.09	(7.5) 4.00	(8) 4.05
	(33)	(30)	(27.5)	(30)	(37.5)	(36)	(36)	(36)	(13)	(29)	(36.5)	(27)	(24)	(34)	(30.5)	(31)	(31)	(28)	(28)

Adapt spoken word usage to the job situation	(8) 4.17	(11) 3.84	(5.5) 4.38	(9) 4.13	(13) 3.79	(11.5) 4.07	(19.5) 3.73	(14) 3.86	(16) 3.44	(8) 3.47	(10) 3.46	(11) 3.46	(3) 4.71	(15.5) 3.92	(10. 4.0
Use the voice effectively and pronunciation of words correctly	(17) 3.59	(19) 3.25	(11) 4.23	(15.5) 3.69	(10) 4.00	(10) 3.85	(16.5) 3.88	(12) 3.91	(21.5) 3.17	(16.5) 2.84	(17.5) 2.62	(17) 2.88	(12) 4.33	(6.5) 4.50	(12) 3.9
Maintain confidentiality concerning job-related information	(2) 4.49	(9.5) 3.94	(12) 4.15	(8) 4.19	(14) 3.71	(7.5) 4.37	(8) 4.27	(10) 4.12	(23) 3.12	(23) 2.44	(22) 2.38	(22) 2.65	(1) 4.86	(2) 4.67	(1) 4.8
Use the telephone effectively	(12.5) 3.94	(21.5) 3.19	(14) 4.10	(13.5) 3.74	(2) 4.42	(7.5) 4.37	(13) 4.12	(6) 4.30	(26) 2.94	(25) 2.05	(30) 1.77	(26) 2.25	(20.5) 3.90	(9) 4.38	(21) 2.9
Respond to non-verbal communication (Body language)	(36) 2.46	(37) 2.25	(33.5) 2.79	(37) 2.50	(30) 2.50	(30) 2.59	(33) 2.24	(30) 2.44	(34) 2.11	(27.5) 1.79	(30) 1.77	(33) 1.89	(10) 4.38	(25) 3.13	(9) 4.2
Complete job-related forms (Applications, purchase requisitions, invoices, sales receipts, orders)	(12.5) 3.94	(24.5) 3.03	(1) 4.49	(12) 3.82	(15.5) 3.68	(15.5) 3.96	(19.5) 3.73	(17) 3.79	(17.5) 3.33	(22) 2.47	(20.5) 2.46	(20) 2.75	(27) 3.48	(20) 3.52	(23. 2.4
Handle receptions and introductions competently	(27) 3.14	(29) 2.78	(20.5) 3.50	(26) 3.14	(23) 3.16	(20) 3.70	(23) 3.33	(22) 3.40	(31) 2.61	(31) 1.74	(25.5) 2.00	(29) 2.15	(31.5) 3.14	(17) 3.88	(26. 2.2
Remember essential information	(1) 4.66	(2) 4.50	(5.5) 4.38	(1) 4.51	(1) 4.50	(4.5) 4.44	(5) 4.33	(4) 4.42	(5) 4.28	(1) 4.42	(3.5) 4.15	(3) 4.28	(5.5) 4.62	(1) 4.75	(7) 4.5
Take notes effectively	(23.5) 3.37	(20) 3.22	(20.5) 3.50	(23.5) 3.36	(15.5) 3.68	(17) 3.93	(18) 3.79	(16) 3.80	(21.5) 3.17	(20.5) 2.53	(23) 2.23	(23) 2.64	(22) 3.86	(19) 3.54	(28 2.1
Write a business letter	(29) 2.97	(38) 2.22	(32) 2.84	(33) 2.67	(22) 3.24	(22.5) 3.48	(22) 3.42	(23) 3.38	(36.5) 1.89	(37.5) 1.37	(36.5) 1.31	(38) 1.52	(39) 2.05	(32) 2.33	(39 1.3
Use abbreviations and numbers in report writing	(19.5) 3.53	(28) 2.88	(30.5) 2.92	(27) 3.11	(25) 3.03	(27) 2.85	(26.5) 3.12	(26) 3.00	(28) 2.89	(24) 2.16	(33.5) 1.62	(28) 2.22	(25) 3.71	(26) 3.08	(26 2.7
Give instructions orally	(22) 3.43	(13) 3.69	(13) 4.11	(13.5) 3.74	(24) 3.13	(25) 3.00	(28) 2.97	(25) 3.03	(11.5) 3.67	(10.5) 3.37	(11) 3.31	(12) 3.45	(14) 4.24	(12) 4.25	(10 4.0
Understand oral instructions	(6) 4.23	(3) 4.44	(4) 4.39	(3) 4.35	(5.5) 4.32	(3) 4.56	(3) 4.36	(5) 4.41	(1) 4.50	(2.5) 4.26	(3.5) 4.15	(1.5) 4.30	(4) 4.67	(3.5) 4.58	(3. 4.7
Interpret and explain graphic illustrations (graphs, charts, tables)	(28) 3.03	(26.5) 3.03	(35.5) 2.74	(28) 2.93	(32.5) 2.11	(34) 1.93	(31) 2.36	(33) 2.13	(17.5) 3.33	(13.5) 3.00	(2) 4.23	(10) 3.52	(23) 3.81	(31) 2.43	(35 1.5
Proofread and edit written communications	(31.5) 2.83	(33) 2.56	(37) 2.61	(34) 2.62	(19) 3.63	(22.5) 3.48	(14.5) 4.00	(20.5) 3.70	(29) 2.78	(40) 1.32	(27.5) 1.92	(32) 2.01	(34) 2.76	(30) 2.50	(37 1.4
Write a general report	(31.5) 2.83	(32) 2.59	(38) 2.45	(32) 2.68	(34) 2.05	(33) 2.07	(32) 2.30	(32) 2.14	(36.5) 1.89	(35.5) 1.42	(33.5) 1.62	(36) 1.64	(33) 2.95	(38) 1.61	(35 1.5
Work cooperatively with other employees	(3.5) 4.37	(1) 4.56	(2) 4.47	(2) 4.47	(4) 4.37	(1) 4.74	(7) 4.30	(2) 4.47	(3) 4.33	(2.5) 4.26	(1) 4.31	(1.5) 4.30	(5.5) 4.62	(3.5) 4.58	(5) 4.4
Organize and lead a conference	(37) 2.34	(34.5) 2.50	(27.5) 3.00	(35) 2.61	(37.5) 1.76	(39) 1.31	(38) 1.67	(39) 1.58	(38) 1.83	(34) 1.58	(35) 1.46	(37) 1.62	(37) 2.48	(39) 1.52	(37 1.1
Question individuals to clarify information	(14) 3.80	(8) 4.06	(15) 4.00	(11) 3.95	(12) 3.84	(13) 4.04	(21) 3.55	(15) 3.81	(8.5) 3.94	(16.5) 2.84	(12.5) 3.23	(13) 3.34	(17) 4.14	(15.5) 3.92	(1 3.
Use Grammar correctly	(25.5) 3.31	(15.5) 3.44	(16) 3.97	(18) 3.57	(7) 4.16	(11.5) 4.07	(5) 4.33	(9) 4.19	(20) 3.22	(18.5) 2.74	(24) 2.08	(21) (2.68	(20.5) 3.90	(10) 4.33	(1 3.
Spell correctly	(18) 3.57	(17) 3.31	(18) 3.79	(19) 3.56	(5.5) 4.32	(2) 4.59	(1) 4.67	(1) 4.53	(14.5) 3.61	(20.5) 2.53	(19) 2.54	(16) 2.89	(10) 4.38	(6.5) 4.50	(1 3.
Punctuate	(30) 2.86	(36) 2.44	(29) 2.97	(31) 2.76	(17.5) 3.58	(15.5) 3.96	(11.5) 4.15	(13) 3.90	(31) 2.61	(33) 1.63	(25.5) 2.00	(31) 2.08	(31.5) 3.14	(23) 3.29	(2 2.
Express ideas clearly and concisely	(11) 4.00	(7) 4.19	(3) 4.42	(7) 4.20	(17.5) 3.58	(21) 3.54	(11.5) 4.15	(19) 3.76	(4) 4.29	(9) 3.42	(7.5) 3.62	(6.5) 3.78	(15.5) 4.19	(14) 4.00	(14) 3.7
Present technical data orally	(19.5) 3.53	(14) 3.48	(24) 3.22	(21.5) 3.41	(31) 2.29	(31) 2.15	(30) 2.61	(31) 2.35	(14.5) 3.61	(15) 2.89	(14.5) 2.92	(14) 3.14	(30) 3.24	(24) 3.21	(23 2.4
Read to comprehend job-related and technical materials	(15) 3.71	(9.5) 3.94	(22) 3.43	(15.5) 3.69	(26.5) 2.82	(28) 2.81	(25) 3.15	(28) 2.93	(10) 3.78	(10.5) 3.37	(9) 3.54	(9) 3.56	(15.5) 4.19	(21.5) 3.42	(16 3.2
Lead a problem-solving or informational discussion group	(38) 2.32	(31) 2.63	(33.5) 2.79	(36) 2.58	(39) 1.74	(40) 1.27	(39.5) 1.58	(40) 1.53	(35) 2.00	(27.5) 1.79	(32) 1.69	(34) 1.83	(35) 2.71	(37) 1.65	(34 1.5
Participate in a problem-solving or informational discussion group	(34) 2.74	(26) 3.00	(30.5) 2.92	(29) 2.89	(36) 1.87	(35) 1.88	(35) 2.06	(35) 1.94	(33) 2.50	(26) 1.84	(20.5) 2.46	(25) 2.27	(26) 3.52	(35) 1.83	(29 2.1
Listen for main ideas	(21) 3.44	(15.5) 3.44	(17) 3.95	(17) 3.61	(28) 2.79	(26) 2.92	(26.5) 3.12	(27) 2.94	(19) 3.28	(12) 3.26	(16) 2.77	(15) 3.10	(19) 4.00	(27) 2.96	(18 3.2
Prepare written work neatly	(9) 4.11	(27) 2.94	(26) 3.18	(21.5) 3.41	(11) 3.97	(10) 4.12	(9) 4.18	(11) 4.09	(8.5) 3.94	(31) 1.74	(30) 1.77	(24) 2.48	(28) 3.43	(18) 3.79	(30 2.0
Skim for pertinent information	(25.5) 3.31	(23) 3.13	(25) 3.21	(25) 3.22	(26.5) 2.82	(24) 3.04	(24) 3.30	(24) 3.05	(31) 2.61	(31) 1.74	(27.5) 1.92	(30) 2.09	(29) 3.38	(29) 2.58	(25 2.3
Lead and participate in a business meeting (Parliamentary procedure)	(40) 2.00	(40) 2.00	(39) 2.37	(40) 2.12	(40) 1.66	(38) 1.58	(39.5) 1.58	(38) 1.61	(39) 1.56	(37.5) 1.37	(39) 1.15	(40) 1.33	(40) 2.00	(40) 1.43	(39 1.3
Understand occupational terminology	(3.5) 4.37	(4) 4.31	(9.5) 4.29	(4) 4.32	(20) 3.42	(14) 4.00	(16.5) 3.88	(18) 3.77	(6) 4.22	(4) 4.16	(5) 3.92	(4) 4.10	(2) 4.81	(5) 4.54	(3. 4.7
Read aloud effectively	(39) 2.03	(39) 2.03	(35.5) 2.74	(39) 2.27	(32.5) 2.11	(32) 2.12	(34) 2.09	(34) 2.11	(40) 1.50	(35.5) 1.42	(38) 1.23	(39) 1.38	(38) 2.24	(33) 2.22	(32 1.1
Recognize fact from opinion	(23.5) 3.37	(21.5) 3.19	(19) 3.53	(23.5) 3.36	(29) 2.74	(29) 2.73	(29) 2.85	(29) 2.77	(26) 2.94	(13.5) 3.00	(17.5) 2.62	(2.5) 2.85	(18) 4.10	(28) 2.74	(20 3.1
Listen tactfully	(10) 4.09	(12) 3.75	(9.5) 4.29	(10) 4.04	(9) 4.11	(6) 4.38	(10) 4.16	(8) 4.22	(11.5) 3.67	(5) 4.05	(7.5) 3.62	(6.5) 3.78	(7.5) 4.52	(11) 4.29	(2) 4.1
Give attention to details	(7) 4.21	(5.5) 4.25	(8) 4.31	(6) 4.26	(8) 4.14	(9) 4.22	(5) 4.33	(7) 4.23	(2) 4.39	(6) 3.94	(6) 3.85	(5) 4.06	(10) 4.38	(13) 4.04	(8) 4.2
Adjust to a variable work load	(5) 4.26	(5.5) 4.25	(7) 4.33	(5) 4.28	(3) 4.39	(4.5) 4.44	(2) 4.55	(3) 4.46	(7) 4.00	(7) 3.67	(12.5) 3.23	(8) 3.63	(13) 4.29	(8) 4.46	(6) 4.2
Participate in a conference	(33) 2.76	(30) 2.66	(27.5) 3.00	(30) 2.81	(37.5) 1.76	(36) 1.85	(36) 1.97	(36) 1.86	(13) 3.64	(29) 1.78	(36.5) 1.31	(27) 2.24	(24) 3.79	(34) 1.91	(30 2.1
Write a formal, documented report	(35) 2.54	(34.5) 2.50	(40) 2.05	(38) 2.36	(35) 1.92	(37) 1.74	(37) 1.76	(37) 1.81	(24) 3.00	(39) 1.33	(40) 1.00	(35) 1.78	(36) 2.70	(36) 1.70	(37 1.1
Means for Programs and Program Clusters	3.43	3.27	3.53	3.41	3.21	3.30	3.35	3.29	3.16	2.59	2.55	2.77	3.75	3.34	3.

*Rank Order

**Mean response on a 5-point Likert scale when 5 points were awarded for each Extremely Important response, 4 points for Very Important, 3 points for Important, 2 points for Moderately Important, and 1 point for Not Important.

***Rank Order determined by Program Cluster means

****Program Cluster Me
are Means of Progra

	(17) 3.59	(19) 3.25	(11) 4.23	(15.5) 3.69	(10) 4.00	(18) 3.85	(16.5) 3.88	(12) 3.91	3.17	2.84	2.62	2.88	(12) 4.33	(6.5) 4.50	(12) 3.89	(9) 4.24	3.66	3.21	3.44
	(2) 4.49	(9.5) 3.94	(12) 4.15	(8) 4.19	(14) 3.71	(7.5) 4.37	(8) 4.27	(10) 4.12	(23) 3.12	(23) 2.44	(22) 2.38	(22) 2.65	(1) 4.86	(2) 4.67	(1) 4.84	(1) 4.79	(24.5) 3.20	(22) 3.26	(24) 3.28
	(12.5) 3.94	(21.5) 3.19	(14) 4.10	(13.5) 3.74	(3) 3.42	(7.5) 4.37	(13) 4.12	(6) 4.30	(26) 2.94	(25) 2.05	(30) 1.77	(26) 2.25	(20.5) 3.90	(9) 4.38	(21) 2.95	(17) 3.74	(26.5) 3.14	(24.5) 3.11	(27) 3.13
	(36) 2.46	(37) 2.25	(33.5) 2.79	(37) 2.50	(30) 2.50	(30) 2.59	(33) 2.24	(30) 2.44	(24) 2.11	(27.5) 1.79	(30) 1.77	(33) 1.89	(10) 4.38	(25) 3.13	(9) 4.26	(15) 3.92	(38) 2.11	(38) 2.07	(38) 2.09
me,	(12.5) 3.94	(24.5) 3.08	(1) 4.49	(12) 3.82	(15.5) 3.68	(15.5) 3.96	(19.5) 3.73	(17) 3.79	(17.5) 3.33	(22) 2.47	(20.5) 2.46	(20) 2.75	(27) 3.48	(20) 3.52	(23.5) 2.47	(23) 3.16	(15.5) 3.66	(18) 3.50	(16) 3.58
	(27) 3.14	(29) 2.78	(20.5) 3.50	(26) 3.14	(23) 3.16	(20) 3.70	(23) 3.33	(22) 3.40	(31) 2.61	(31) 1.74	(25.5) 2.00	(29) 2.15	(31.5) 3.14	(17) 3.88	(26.5) 2.21	(25) 3.08	(28) 2.91	(30) 2.57	(30) 2.74
	(1) 4.66	(2) 4.50	(5.5) 4.38	(1) 4.51	(1) 4.50	(4.5) 4.44	(5) 4.33	(4) 4.42	(5) 4.28	(1) 4.42	(3.5) 4.15	(3) 4.28	(5.5) 4.62	(1) 4.75	(7) 4.58	(4) 4.65	(2) 4.51	(3.5) 4.29	(2) 4.40
	(23.5) 3.37	(20) 3.22	(20.5) 3.50	(23.5) 3.36	(15.5) 3.68	(17) 3.93	(18) 3.79	(16) 3.80	(21.5) 3.17	(20.5) 2.53	(23) 2.23	(23) 2.64	(22) 3.86	(19) 3.54	(28) 2.17	(22) 3.19	(23) 3.29	(26) 3.07	(26) 3.18
	(29) 2.97	(38) 2.22	(32) 2.84	(33) 2.67	(22) 3.24	(22.5) 3.69	(22) 3.47	(23) 3.38	(36.5) 1.89	(37.5) 1.37	(36.5) 1.31	(38) 1.52	(39) 2.05	(32) 2.33	(39.5) 1.37	(39) 1.92	(35) 2.29	(36) 2.25	(35) 2.27
	(19.5) 3.53	(28) 2.98	(30.5) 2.92	(27) 3.11	(25) 3.03	(27) 2.85	(26.5) 3.12	(26) 3.00	(28) 2.89	(24) 2.16	(33.5) 1.62	(28) 2.22	(25) 3.71	(26) 3.08	(26.5) 2.21	(26.5) 3.00	(30) 2.74	(31.5) 2.54	(31) 2.64
	(22) 3.43	(13) 3.69	(13) 4.11	(13.5) 3.74	(24) 3.13	(25) 3.00	(28) 2.97	(25) 3.03	(11.5) 3.67	(10.5) 3.37	(11) 3.31	(12) 3.45	(14) 4.24	(12) 4.25	(10.5) 4.00	(11) 4.16	(11) 3.74	(16.5) 3.57	(15) 3.66
	(6) 4.23	(3) 4.44	(4) 4.39	(3) 4.35	(5.5) 4.32	(3) 4.56	(3) 4.36	(5) 4.41	(1) 4.50	(2.5) 4.26	(3.5) 4.15	(1.5) 4.30	(4) 4.67	(3.5) 4.58	(3.5) 4.74	(3) 4.66	(5) 4.20	(2) 4.43	(4) 4.32
ables)	(28) 3.03	(24.5) 3.03	(35.5) 2.74	(28) 2.93	(32.5) 2.11	(34) 1.93	(31) 2.36	(33) 2.13	(17.5) 3.33	(13.5) 3.00	(2) 4.23	(10) 3.52	(23) 3.81	(31) 2.43	(35.5) 1.53	(30) 2.59	(13) 3.71	(10) 3.89	(11.5) 3.80
	(31.5) 2.83	(33) 2.56	(37) 2.61	(34) 2.62	(19) 3.63	(22.5) 3.48	(14.5) 4.00	(20.5) 3.70	(29) 2.78	(40) 1.32	(27.5) 1.92	(32) 2.01	(34) 2.76	(30) 2.50	(37.5) 1.47	(33) 2.24	(36) 2.21	(35) 2.26	(36.5) 2.24
	(31.5) 2.83	(32) 2.59	(38) 2.45	(32) 2.68	(34) 2.05	(33) 2.07	(32) 2.30	(32) 2.14	(36.5) 1.89	(35.5) 1.42	(33.5) 1.62	(36) 1.64	(33) 2.95	(38) 1.61	(35.5) 1.53	(35) 2.03	(33) 2.60	(31.5) 2.54	(33) 2.57
	(3.5) 4.37	(1) 4.56	(2) 4.47	(2) 4.47	(4) 4.37	(1) 4.74	(7) 4.30	(2) 4.47	(3) 4.33	(2.5) 4.26	(1) 4.31	(1.5) 4.30	(5.5) 4.62	(3.5) 4.58	(5) 4.68	(5) 4.63	(4) 4.29	(1) 4.46	(3) 4.38
	(37) 2.34	(34.5) 2.50	(27.5) 3.00	(35) 2.61	(37.5) 1.76	(39) 1.31	(38) 1.67	(39) 1.58	(38) 1.83	(34) 1.58	(35) 1.46	(37) 1.62	(37) 2.48	(39) 1.52	(32.5) 1.84	(38) 1.95	(37) 2.12	(34) 2.36	(36.5) 2.24
	(14) 3.80	(8) 4.06	(15) 4.00	(11) 3.95	(12) 3.84	(13) 4.04	(21) 3.55	(15) 3.81	(8.5) 3.94	(16.5) 2.84	(12.5) 3.23	(13) 3.34	(17) 4.14	(15.5) 3.92	(18) 3.21	(16) 3.76	(13) 3.71	(9) 3.93	(10) 3.82
	(25.5) 3.31	(15.5) 3.44	(16) 3.97	(18) 3.57	(7) 4.16	(11.5) 4.07	(5) 4.33	(9) 4.19	(20) 3.22	(18.5) 2.74	(24) 2.08	(21) (2.68	(20.5) 3.90	(10) 4.33	(13) 3.79	(13) 4.01	(22) 3.31	(21) 3.32	(21) 3.32
	(18) 3.57	(17) 3.31	(18) 3.79	(19) 3.56	(5.5) 4.32	(2) 4.59	(1) 4.67	(1) 4.53	(14.5) 3.61	(20.5) 2.53	(19) 2.54	(16) 2.89	(10) 4.38	(6.5) 4.50	(15) 3.53	(12) 4.14	(21) 3.32	(13.5) 3.79	(17) 3.56
	(30) 2.86	(36) 2.44	(29) 2.97	(31) 2.76	(17.5) 3.58	(15.5) 3.96	(11.5) 4.15	(13) 3.90	(31) 2.61	(33) 1.63	(25.5) 2.00	(31) 2.06	(31.5) 3.14	(23) 3.29	(22) 2.56	(26.5) 3.00	(32) 2.69	(33) 2.46	(32) 2.58
	(11) 4.00	(7) 4.19	(3) 4.42	(7) 4.20	(17.5) 3.58	(21) 3.54	(11.5) 4.15	(19) 3.76	(4) 4.29	(9) 3.42	(7.5) 3.62	(6.5) 3.78	(15.5) 4.19	(14) 4.00	(14) 3.74	(14) 3.98	(6) 4.18	(5.5) 4.25	(5) 4.22
	(19.5) 3.53	(14) 3.48	(24) 3.22	(21.5) 3.41	(31) 2.29	(31) 2.15	(30) 2.61	(31) 2.35	(14.5) 3.61	(15) 2.89	(14.5) 2.92	(14) 3.14	(30) 3.24	(24) 3.21	(23.5) 2.47	(28) 2.97	(10) 3.80	(15) 3.64	(14) 3.72
	(15) 3.71	(9.5) 3.94	(22) 3.43	(15.5) 3.69	(26.5) 2.82	(28) 2.81	(25) 3.15	(28) 2.93	(10) 3.78	(10.5) 3.37	(9) 3.54	(9) 3.56	(15.5) 4.19	(21.5) 3.42	(16) 3.28	(19) 3.63	(3) 4.34	(13.5) 3.79	(7) 4.07
	(38) 2.32	(31) 2.63	(33.5) 2.79	(36) 2.58	(39) 1.76	(40) 1.27	(39.5) 1.58	(40) 1.53	(35) 2.00	(27.5) 1.79	(32) 1.69	(34) 1.83	(35) 2.71	(37) 1.65	(34) 1.58	(36) 1.98	(29) 2.82	(29) 2.68	(29) 2.75
n group	(34) 2.74	(26) 3.00	(30.5) 2.92	(29) 2.89	(36) 1.87	(35) 1.88	(35) 2.06	(35) 1.94	(33) 2.50	(26) 1.84	(20.5) 2.46	(25) 2.27	(26) 3.52	(35) 1.83	(29) 2.11	(32) 2.49	(20) 3.34	(19.5) 3.36	(20) 3.35
	(21) 3.44	(15.5) 3.44	(17) 3.95	(17) 3.61	(28) 2.79	(26) 2.92	(26.5) 3.12	(27) 2.94	(19) 3.28	(12) 3.26	(16) 2.77	(15) 3.10	(19) 4.00	(27) 2.96	(18) 3.21	(20) 3.39	(17) 3.60	(7.5) 4.00	(11.5) 3.80
	(9) 4.11	(27) 2.94	(26) 3.18	(21.5) 3.41	(11) 3.97	(10) 4.12	(9) 4.18	(11) 4.09	(8.5) 3.94	(31) 1.74	(30) 1.77	(24) 2.48	(28) 3.43	(18) 3.79	(30.5) 2.05	(24) 3.09	(26.5) 3.14	(19.5) 3.36	(23) 3.25
	(25.5) 3.31	(44) 3.13	(25) 3.21	(25) 3.22	(26.5) 2.82	(24) 3.04	(24) 3.30	(24) 3.05	(31) 2.61	(31) 1.74	(27.5) 1.92	(30) 2.09	(29) 3.38	(29) 2.58	(25) 2.32	(29) 2.76	(19) 3.40	(27) 3.00	(25) 3.20
procedure)	(40) 2.00	(40) 2.00	(39) 2.37	(40) 2.12	(40) 1.66	(38) 1.58	(39.5) 1.58	(38) 1.61	(39) 1.56	(37.5) 1.37	(39) 1.15	(40) 1.33	(40) 2.00	(40) 1.43	(39.5) 1.37	(40) 1.60	(40) 1.82	(39) 1.93	(40) 1.88
	(3.5) 4.37	(4) 4.31	(9.5) 4.29	(4) 4.32	(20) 3.42	(14) 4.00	(16.5) 3.88	(18) 3.77	(6) 4.22	(4) 4.16	(5) 3.92	(4) 4.10	(2) 4.81	(5) 4.54	(3.5) 4.74	(2) 4.70	(1) 4.57	(3.5) 4.29	(1) 4.43
	(39) 2.03	(39) 2.03	(35.5) 2.74	(39) 2.27	(32.5) 2.11	(32) 2.12	(34) 2.09	(34) 2.11	(40) 1.50	(35.5) 1.42	(38) 1.23	(39) 1.38	(38) 2.24	(33) 2.22	(32.5) 1.84	(34) 2.10	(39) 2.03	(40) 1.82	(39) 1.93
	(23.5) 3.37	(21.5) 3.19	(19) 3.53	(23.5) 3.36	(29) 2.74	(29) 2.73	(29) 2.85	(29) 2.77	(26) 2.94	(13.5) 3.00	(17.5) 2.62	(19) 2.85	(18) 4.10	(28) 2.74	(20) 3.11	(21) 3.32	(24.5) 3.20	(16.5) 3.57	(19) 3.39
	(10) 4.09	(12) 3.75	(9.5) 4.29	(10) 4.04	(9) 4.11	(6) 4.38	(10) 4.16	(8) 4.22	(11.5) 3.67	(5) 4.05	(7.5) 3.62	(6.5) 3.78	(7.5) 4.52	(11) 4.29	(2) 4.79	(6) 4.53	(13) 3.71	(11.5) 3.86	(13) 3.79
	(7) 4.21	(5.5) 4.25	(8) 4.31	(6) 4.26	(8) 4.14	(9) 4.22	(5) 4.33	(7) 4.23	(2) 4.39	(6) 3.94	(6) 3.85	(5) 4.06	(10) 4.38	(13) 4.04	(8) 4.53	(8) 4.32	(7) 4.11	(5.5) 4.25	(6) 4.18
	(5) 4.26	(5.5) 4.25	(7) 4.33	(5) 4.28	(3) 4.39	(4.5) 4.44	(2) 4.55	(3) 4.46	(7) 4.00	(7) 3.67	(12.5) 3.23	(8) 3.63	(13) 4.29	(8) 4.46	(6) 4.63	(7) 4.46	(8) 4.09	(7.5) 4.00	(8) 4.05
	(33) 2.76	(30) 2.66	(27.5) 3.00	(30) 2.81	(37.5) 1.76	(36) 1.85	(36) 1.97	(36) 1.86	(13) 3.64	(29) 1.78	(36.5) 1.31	(27) 2.24	(24) 3.79	(34) 1.91	(30.5) 2.05	(31) 2.58	(31) 2.71	(28) 2.96	(28) 2.84
	(35) 2.54	(34.5) 2.50	(40) 2.05	(38) 2.36	(35) 1.92	(37) 1.74	(37) 1.76	(37) 1.81	(24) 3.00	(39) 1.33	(40) 1.00	(35) 1.78	(36) 2.70	(36) 1.70	(37.5) 1.47	(37) 1.96	(34) 2.35	(37) 2.21	(34) 2.28
	3.43	3.27	3.53	3.41	3.21	3.30	3.35	3.29	3.16	2.59	2.55	2.77	3.75	3.34	3.01	3.37	3.32	3.27	3.31

kert scale when 5 points were awarded for each
, 4 points for Very Important, 3 points for
tely Important, and 1 point for Not Important.

***Rank Order determined by Program Cluster means

****Program Cluster Means
are Means of Program Means

RANK ORDER AND MEAN RESPONSE OF THE FORTY COMMUNICATION SKILLS COMPETENCIES WITHIN PROGRAMS AND PROGRAM CLUSTERS ACCORDING TO RESPONSES OF SUPERVISORS

THE THIRTEEN PROGRAMS AND FIVE PROGRAM CLUSTERS

COMPETENCIES	10-101 Accounting (n = 40)	10-107 Data Processing (n = 42)	10-104 Marketing (n = 35)	Office and Distribution Cluster	31-106 Clerk-Typist (n = 34)	31-106 Stenographer (n = 33)	10-106 Secretarial Science (n = 27)	Secretarial Cluster	31-421 Mechanical Drafting (n = 39)	31-420/32-420 Machine Tool Operation (n = 38)	Industrial Machine Cluster	31-510 Practical Nursing (n = 31)	31-509 Medical Assistant (n = 25)	31-512
Adapt written word usage to the job situation	(16.5)* 3.80**	(13) 4.00	(11) 4.03	(12)*** 3.9488	(15) 3.79	(16) 4.09	(18.5) 3.74	(16) 3.87	(16) 3.67	(13.5) 3.42	(15) 3.55	(9) 4.45	(18.5) 3.56	(18) 3.61
Adapt spoken word usage to the job situation	(11) 4.00	(16) 3.88	(8) 4.14	(9) 4.00	(13.5) 3.91	(14) 4.15	(15.5) 3.85	(13) 3.97	(9) 3.82	(9) 3.87	(9) 3.85	(7) 4.52	(11) 4.04	(8.5) 4.26
Use the voice effectively and pronunciation of words correctly	(22) 3.65	(32) 3.02	(15) 3.91	(23) 3.52	(16) 3.74	(20) 3.97	(22.5) 3.67	(20) 3.79	(26) 2.85	(25) 2.68	(26) 2.77	(18) 4.03	(13) 3.84	(13) 3.96
Maintain confidentiality concerning job-related information	(1) 4.55	(4) 4.38	(6) 4.17	(4) 4.36	(1) 4.58	(1) 4.70	(1) 4.69	(1) 4.66	(11.5) 3.77	(20) 3.05	(17.5) 3.41	(1) 4.84	(1) 4.76	(1.5) 4.87
Use the telephone effectively	(12) 3.95	(25.5) 3.29	(6) 4.17	(17) 3.80	(8) 4.26	(9) 4.33	(7) 4.22	(8) 4.27	(21) 3.31	(26) 2.66	(23) 2.99	(18) 4.03	(2) 4.52	(11.5) 4.04
Respond to non-verbal communication (Body language)	(40) 2.20	(39) 2.17	(32.5) 3.27	(39) 2.54	(30) 2.53	(31.5) 2.63	(29) 2.60	(30) 2.59	(38) 1.97	(40) 1.68	(40) 1.83	(20) 3.97	(22.5) 3.24	(10) 4.09
Complete job-related forms (Applications, purchase requisitions, invoices, sales receipts, orders)	(9) 4.08	(27) 3.21	(12) 4.00	(18) 3.76	(18) 3.62	(21) 3.94	(14) 3.89	(18) 3.82	(22) 3.28	(18) 3.19	(19) 3.24	(32) 3.07	(26.5) 3.08	(22) 3.35
Handle receptions and introductions competently	(27) 3.48	(33.5) 2.98	(10) 4.06	(24) 3.50	(25.5) 3.21	(18) 4.06	(22.5) 3.67	(22) 3.65	(34) 2.54	(27) 2.64	(28) 2.59	(26) 3.55	(20) 3.38	(28) 2.87
Remember essential information	(2) 4.38	(3) 4.43	(1) 4.43	(1.5) 4.41	(6) 4.38	(3) 4.67	(5.5) 4.26	(4.5) 4.44	(4) 4.18	(2) 4.27	(3) 4.23	(3) 4.74	(5) 4.42	(5) 4.52
Take notes effectively	(22) 3.65	(10.5) 4.07	(26) 3.54	(19) 3.75	(19) 3.58	(11) 4.30	(15.5) 3.85	(15) 3.91	(8) 3.85	(18) 3.19	(16) 3.52	(18) 4.03	(17) 3.67	(23) 3.17
Write a business letter	(19.5) 3.70	(35) 2.79	(20.5) 3.80	(27) 3.43	(24) 3.32	(16) 4.09	(21) 3.71	(21) 3.71	(31) 2.64	(36) 2.11	(33.5) 2.38	(40) 2.03	(32) 2.33	(39) 1.57
Use abbreviations and numbers in report writing	(35) 3.00	(37) 2.67	(39) 2.71	(37) 2.79	(29) 2.85	(30) 2.70	(31) 2.42	(29) 2.66	(29) 2.72	(31) 2.28	(30) 2.50	(30) 3.19	(28) 2.96	(30) 2.50
Give instructions orally	(15) 3.63	(17) 3.83	(20.5) 3.80	(16) 3.82	(27.5) 3.18	(23) 3.67	(25) 3.37	(25) 3.41	(18) 3.51	(12) 3.62	(13.5) 3.57	(14) 4.19	(14) 3.83	(11.5) 4.04
Understand oral instructions	(6) 4.20	(7) 4.26	(4) 4.23	(5.5) 4.23	(4) 4.44	(5) 4.64	(5.5) 4.26	(3) 4.45	(3) 4.21	(3) 4.19	(4) 4.20	(4.5) 4.68	(4) 4.46	(4) 4.61
Interpret and explain graphic illustrations (graphs, charts, tables)	(31.5) 3.18	(25.5) 3.29	(34.5) 3.26	(32) 3.24	(35) 2.09	(33) 2.44	(34) 2.19	(34) 2.24	(17) 3.62	(18) 3.19	(17.5) 3.41	(33) 3.06	(34) 2.04	(35) 1.87
Proofread and edit written communications	(28) 3.43	(30) 3.12	(25) 3.57	(29) 3.37	(20) 3.56	(19) 4.00	(8.5) 4.19	(14) 3.92	(27) 2.79	(34.5) 2.19	(31) 2.49	(36) 2.53	(31) 2.38	(40) 1.48
Write a general report	(31.5) 3.18	(20.5) 3.40	(31) 3.29	(30) 3.29	(31) 2.29	(29) 2.72	(30) 2.48	(31) 2.50	(32) 2.62	(30) 2.31	(32) 2.47	(34) 2.97	(36) 1.91	(37.5) 1.74
Work cooperatively with other employees	(3) 4.35	(2) 4.48	(2) 4.40	(1.5) 4.41	(2) 4.50	(3) 4.67	(2) 4.59	(2) 4.59	(1) 4.51	(1) 4.41	(1) 4.46	(2) 4.81	(3) 4.50	(1.5) 4.87
Organize and lead a conference	(36) 2.80	(33.5) 2.98	(27.5) 3.49	(36) 3.09	(38) 1.97	(35) 2.36	(37) 1.93	(37) 2.09	(37) 2.26	(33) 2.22	(36) 2.24	(31) 3.10	(38) 1.75	(31.5) 2.30
Question individuals to clarify information	(19.5) 3.70	(5) 4.31	(17.5) 3.89	(10) 3.96	(21) 3.53	(24) 3.61	(17) 3.78	(23) 3.64	(11.5) 3.77	(15) 3.41	(12) 3.59	(15) 4.16	(12) 3.88	(17) 3.65
Use Grammar correctly	(22) 3.65	(28) 3.19	(17.5) 3.89	(21) 3.57	(9) 4.12	(8) 4.42	(12.5) 3.93	(9.5) 4.16	(24) 2.95	(24) 2.70	(25) 2.83	(16) 4.10	(15) 3.79	(20) 3.52
Spell correctly	(13) 3.90	(31) 3.07	(23.5) 3.71	(22) 3.56	(7) 4.36	(3) 4.67	(4) 4.30	(4.5) 4.44	(19) 3.41	(22) 2.81	(20) 3.11	(10) 4.42	(10) 4.25	(16) 3.70
Punctuate	(26) 3.50	(36) 2.78	(27.5) 3.49	(31) 3.25	(11.5) 3.97	(13) 4.27	(12.5) 3.93	(12) 4.06	(33) 2.56	(34.5) 2.19	(33.5) 2.38	(28) 3.43	(26.5) 3.08	(31.5) 2.30
Express ideas clearly and concisely	(5) 4.28	(8) 4.24	(6) 4.17	(5.5) 4.23	(17) 3.65	(16) 4.09	(18.5) 3.74	(17) 3.83	(6) 3.97	(8) 3.95	(6) 3.96	(11) 4.39	(16) 3.68	(14) 3.91
Present technical data orally	(29) 3.35	(18) 3.71	(32.5) 3.27	(25.5) 3.44	(33.5) 2.18	(31.5) 2.63	(34) 2.19	(32.5) 2.33	(25) 2.92	(16) 3.22	(21) 3.07	(27) 3.45	(30) 2.40	(24) 3.09
Read to comprehend job-related and technical materials	(25) 3.58	(9) 4.17	(22) 3.79	(15) 3.84	(25.5) 3.21	(27) 3.25	(28) 2.89	(28) 3.12	(13.5) 3.72)	(13.5) 3.42	(13.5) 3.57	(22) 3.90	(25) 3.13	(15) 3.74
Lead a problem-solving or informational discussion group	(38) 2.73	(23) 3.38	(36) 3.21	(34.5) 3.10	(39) 1.82	(39) 2.13	(38) 1.85	(39) 1.93	(36) 2.28	(32) 2.25	(35) 2.27	(35) 2.74	(37) 1.80	(33) 2.17
Participate in a problem-solving or informational discussion group	(33) 3.10	(19) 3.69	(29) 3.47	(28) 3.42	(32) 2.21	(34) 2.41	(32) 2.36	(32.5) 2.33	(30) 2.69	(28) 2.57	(27) 2.63	(24) 3.77	(29) 2.46	(29) 2.83
Listen for main ideas	(16.5) 3.80	(14) 3.98	(13) 3.97	(13) 3.91	(23) 3.38	(26) 3.45	(20) 3.73	(24) 3.52	(13.5) 3.72	(10.5) 3.79	(11) 3.77	(21) 3.94	(21) 3.32	(19) 3.57
Prepare written work neatly	(14) 3.88	(20.5) 3.40	(23.5) 3.71	(20) 3.66	(11.5) 3.97	(11) 4.30	(11) 4.07	(11) 4.11	(20) 3.36	(23) 2.73	(22) 3.05	(23) 3.87	(18.5) 3.56	(25) 3.04
Skim for pertinent information	(24) 3.63	(23) 3.38	(30) 3.31	(25.5) 3.44	(22) 3.41	(28) 3.18	(27) 3.11	(27) 3.23	(23) 2.97	(21) 2.89	(24) 2.93	(29) 3.39	(24) 3.17	(27) 2.96
Lead and participate in a business meeting (Parliamentary procedure)	(37) 2.75	(38) 2.40	(38) 2.80	(38) 2.65	(40) 1.71	(40) 2.03	(40) 1.64	(40) 1.79	(39.5) 1.85	(37.5) 1.92	(38) 1.89	(39) 2.10	(39) 1.72	(36) 1.78
Understand occupational terminology	(18) 3.75	(12) 4.05	(19) 3.85	(14) 3.88	(13.5) 3.91	(22) 3.88	(24) 3.63	(19) 3.81	(10) 3.79	(7) 4.05	(7) 3.92	(12) 4.35	(6) 4.40	(6.5) 4.35
Read aloud effectively	(39) 2.38	(40) 2.10	(40) 2.49	(40) 2.32	(36.5) 2.00	(38) 2.15	(39) 1.78	(38) 1.98	(39.5) 1.85	(39) 1.84	(39) 1.85	(38) 2.42	(40) 1.60	(34) 1.96
Recognize fact from opinion	(10) 3.93	(15) 3.93	(15) 3.91	(11) 3.95	(27.5) 3.18	(25) 3.48	(26) 3.26	(26) 3.31	(7) 3.87	(10.5) 3.79	(10) 3.83	(13) 4.32	(22.5) 3.24	(21) 3.43
Listen tactfully	(8) 4.15	(10.5) 4.07	(9) 4.09	(8) 4.10	(10) 4.03	(11) 4.30	(10) 4.15	(9.5) 4.16	(15) 3.69	(5) 4.13	(8) 3.91	(4.5) 4.68	(8) 4.36	(8.5) 4.26
Give attention to details	(4)	(1)	(3)	(3)	(5)	(7)	(3)	(6)	(2)	(4)	(2)	(8)	(7)	(6.5)

RANK ORDER AND MEAN RESPONSE OF THE FORTY COMMUNICATION SKILLS COMPETENCIES WITHIN PROGRAMS AND PROGRAM CLUSTERS ACCORDING TO RESPONSES OF SUPERVISORS

THE THIRTEEN PROGRAMS AND FIVE PROGRAM CLUSTERS

	10-101 Accounting (n = 40)	10-107 Data Processing (n = 42)	10-104 Marketing (n = 35)	Office and Distribution Cluster	31-106 Clerk Typist (n = 34)	31-106 Stenographer (n = 33)	10-106 Secretarial Science (n = 27)	Secretarial Cluster	31-421 Mechanical Drafting (n = 39)	31-420/32-420 Machine Tool Operation (n = 38)	Industrial Machine Cluster	31-510 Practical Nursing (n = 31)	31-509 Medical Assistant (n = 25)	31-512 Operating Room Assistant (n = 23)	Health Cluster	10-605 Electronics (n = 28)	10-606 Mechanical Design (n = 28)	Industrial Technology Cluster
	(16.5)* 3.80**	(13) 4.00	(11) 4.03	(12)*** 3.9488	(15) 3.79	(16) 4.09	(18.5) 3.74	(16) 3.87	(16) 3.67	(13.5) 3.42	(15) 3.55	(9) 4.45	(18.5) 3.56	(18) 3.61	(16) 3.87	(13) 3.78	(8.5) 3.89	(10) 3.84
	(11) 4.00	(16) 3.88	(8) 4.14	(9) 4.00	(13.5) 3.91	(14) 4.15	(15.5) 3.85	(13) 3.97	(9) 3.82	(9) 3.87	(9) 3.85	(7) 4.52	(11) 4.04	(8.5) 4.26	(9) 4.27	(9) 3.89	(8.5) 3.89	(9) 3.89
rrectly	(22) 3.65	(32) 3.02	(15) 3.91	(23) 3.52	(16) 3.74	(20) 3.97	(22.5) 3.67	(20) 3.79	(26) 2.85	(25) 2.68	(26) 2.77	(18) 4.03	(13) 3.84	(13) 3.96	(14) 3.94	(25) 3.04	(33) 3.00	(28.5) 3.02
ation	(1) 4.55	(4) 4.38	(6) 4.17	(4) 4.36	(1) 4.58	(1) 4.70	(1) 4.69	(1) 4.66	(11.5) 3.77	(20) 3.05	(17.5) 3.41	(1) 4.84	(1) 4.76	(1.5) 4.87	(1) 4.82	(12) 3.79	(10.5) 3.86	(11) 3.82
	(12) 3.95	(25.5) 3.29	(6) 4.17	(17) 3.80	(8) 4.26	(9) 4.33	(7) 4.22	(8) 4.27	(21) 3.31	(26) 2.66	(23) 2.99	(18) 4.03	(2) 4.52	(11.5) 4.04	(10) 4.20	(19) 3.43	(23) 3.28	(21) 3.36
	(40) 2.20	(39) 2.17	(32.5) 3.27	(39) 2.54	(30) 2.53	(31.5) 2.63	(29) 2.60	(30) 2.59	(38) 1.97	(40) 1.68	(40) 1.83	(20) 3.97	(22.5) 3.24	(10) 4.09	(18) 3.77	(38) 2.29	(39) 2.12	(39) 2.20
equisitions,	(9) 4.08	(27) 3.21	(12) 4.00	(18) 3.76	(18) 3.62	(21) 3.94	(14) 3.89	(18) 3.82	(22) 3.28	(18) 3.19	(19) 3.24	(32) 3.07	(26.5) 3.08	(22) 3.35	(25.5) 3.17	(18) 3.46	(32) 3.04	(22) 3.25
	(27) 3.48	(33.5) 2.98	(10) 4.06	(24) 3.50	(25.5) 3.21	(18) 4.06	(22.5) 3.67	(22) 3.65	(34) 2.54	(27) 2.64	(28) 2.59	(26) 3.55	(20) 3.38	(28) 2.87	(24) 3.27	(31) 2.68	(36) 2.67)	(35) 2.67
	(2) 4.38	(3) 4.43	(1) 4.43	(1.5) 4.41	(6) 4.38	(3) 4.67	(5.5) 4.26	(4.5) 4.44	(4) 4.18	(2) 4.27	(3) 4.23	(3) 4.74	(5) 4.42	(5) 4.52	(5) 4.56	(3) 4.29	(2) 4.18	(3) 4.23
	(22) 3.65	(10.5) 4.07	(20) 3.54	(19) 3.75	(19) 3.58	(11) 4.30	(15.5) 3.85	(15) 3.91	(8) 3.85	(18) 3.19	(16) 3.52	(18) 4.03	(17) 3.67	(23) 3.17	(20) 3.62	(20) 3.32	(18) 3.67	(18) 3.49
	(19.5) 3.70	(35) 2.79	(20.5) 3.80	(27) 3.43	(24) 3.32	(16) 4.09	(21) 3.71	(21) 3.71	(31) 2.64	(36) 2.11	(33.5) 2.38	(40) 2.03	(32) 2.33	(39) 1.57	(39) 1.98	(28.5) 2.82	(25) 3.22	(28.5) 3.02
	(35) 3.00	(37) 2.67	(39) 2.71	(37) 2.79	(29) 2.85	(30) 2.70	(31) 2.42	(29) 2.66	(29) 2.72	(31) 2.28	(30) 2.50	(30) 3.19	(28) 2.96	(30) 2.50	(31) 2.88	(37) 2.36	(38) 2.33	(37) 2.35
	(15) 3.83	(17) 3.83	(20.5) 3.80	(16) 3.82	(27.5) 3.18	(23) 3.67	(25) 3.37	(25) 3.41	(18) 3.51	(12) 3.62	(13.5) 3.57	(14) 4.19	(14) 3.83	(11.5) 4.04	(12) 4.02	(14) 3.75	(12) 3.82	(13) 3.79
	(6) 4.20	(7) 4.26	(4) 4.23	(5.5) 4.23	(4) 4.44	(5) 4.64	(5.5) 4.26	(3) 4.45	(3) 4.21	(3) 4.19	(4) 4.20	(4.5) 4.68	(4) 4.46	(4) 4.61	(3) 4.58	(2) 4.39	(3.5) 4.11	(2) 4.25
rts, tables)	(31.5) 3.18	(25.5) 3.29	(34.5) 3.26	(32) 3.24	(35) 2.09	(33) 2.44	(34) 2.19	(34) 2.24	(17) 3.62	(18) 3.19	(17.5) 3.41	(33) 3.06	(34) 2.04	(35) 1.87	(33) 2.32	(17) 3.57	(14) 3.79	(17) 3.68
	(28) 3.43	(30) 3.12	(25) 3.57	(29) 3.37	(20) 3.56	(19) 4.00	(8.5) 4.19	(14) 3.92	(27) 2.79	(34.5) 2.19	(31) 2.49	(36) 2.53	(31) 2.38	(40) 1.48	(36) 2.13	(28.5) 2.82	(34) 2.93	(32.5) 2.88
	(31.5) 3.18	(20.5) 3.40	(31) 3.29	(30) 3.29	(31) 2.29	(29) 2.72	(30) 2.48	(31) 2.50	(32) 2.62	(30) 2.31	(32) 2.47	(34) 2.97	(36) 1.91	(37.5) 1.74	(35) 2.21	(27) 2.86	(26) 3.21	(27) 3.04
	(3) 4.35	(2) 4.48	(2) 4.40	(1.5) 4.41	(2) 4.50	(3) 4.67	(2) 4.59	(2) 4.59	(1) 4.51	(1) 4.41	(1) 4.46	(2) 4.81	(3) 4.50	(1.5) 4.87	(2) 4.73	(1) 4.64	(1) 4.32	(1) 4.48
	(36) 2.80	(33.5) 2.98	(27.5) 3.49	(36) 3.09	(38) 1.97	(35) 2.36	(37) 1.93	(37) 2.09	(37) 2.26	(33) 2.22	(36) 2.24	(31) 3.10	(38) 1.75	(31.5) 2.30	(32) 2.38	(33.5) 2.61	(29) 3.14	(32.5) 2.88
	(19.5) 3.70	(5) 4.31	(17.5) 3.89	(10) 3.96	(21) 3.53	(24) 3.61	(17) 3.78	(23) 3.64	(11.5) 3.77	(15) 3.41	(12) 3.59	(15) 4.16	(12) 3.88	(17) 3.65	(15) 3.90	(11) 3.82	(14) 3.79	(12) 3.80
	(22) 3.65	(28) 3.19	(17.5) 3.89	(21) 3.57	(9) 4.12	(8) 4.42	(12.5) 3.93	(9.5) 4.16	(24) 2.95	(24) 2.70	(25) 2.83	(16) 4.10	(15) 3.79	(20) 3.52	(17) 3.80	(22) 3.21	(29) 3.14	(24) 3.18
	(13) 3.90	(31) 3.07	(23.5) 3.71	(22) 3.56	(7) 4.36	(3) 4.67	(4) 4.30	(4.5) 4.44	(19) 3.41	(22) 2.81	(20) 3.11	(10) 4.42	(10) 4.25	(16) 3.70	(11) 4.12	(26) 2.93	(24) 3.25	(25.5) 3.09
	(26) 3.50	(36) 2.78	(27.5) 3.49	(31) 3.25	(11.5) 3.97	(13) 4.27	(12.5) 3.93	(12) 4.06	(33) 2.56	(34.5) 2.19	(33.5) 2.38	(28) 3.43	(26.5) 3.08	(31.5) 2.30	(30) 2.94	(35) 2.56	(35) 2.70	(36) 2.58
	(5) 4.28	(8) 4.24	(6) 4.17	(5.5) 4.23	(17) 3.65	(16) 4.09	(18.5) 3.74	(17) 3.83	(6) 3.97	(8) 3.95	(6) 3.96	(11) 4.39	(16) 3.68	(14) 3.91	(13) 3.99	(7.5) 4.00	(6.5) 3.96	(7) 3.98
	(29) 3.35	(18) 3.71	(32.5) 3.27	(25.5) 3.44	(33.5) 2.18	(31.5) 2.63	(34) 2.19	(32.5) 2.33	(25) 2.92	(16) 3.22	(21) 3.07	(27) 3.45	(30) 2.40	(24) 3.09	(28) 2.98	(21) 3.30	(19) 3.61	(19) 3.45
	(25) 3.58	(9) 4.17	(22) 3.79	(15) 3.84	(25.5) 3.21	(27) 3.25	(28) 2.89	(28) 3.12	(13.5) 3.72	(13.5) 3.42	(13.5) 3.57	(22) 3.90	(25) 3.13	(15) 3.74	(22) 3.59	(6) 4.07	(6.5) 3.96	(6) 4.02
oup	(38) 2.73	(23) 3.38	(36) 3.21	(34.5) 3.10	(39) 1.82	(39) 2.13	(38) 1.85	(39) 1.93	(36) 2.28	(32) 2.25	(35) 2.27	(35) 2.74	(37) 1.80	(33) 2.17	(34) 2.24	(36) 2.41	(29) 3.14	(34) 2.78
ssion group	(33) 3.10	(19) 3.69	(29) 3.47	(28) 3.42	(32) 2.21	(34) 2.41	(32) 2.36	(32.5) 2.33	(30) 2.69	(28) 2.57	(27) 2.63	(24) 3.77	(29) 2.46	(29) 2.83	(27) 3.02	(32) 2.63	(20.5) 3.54	(25.5) 3.09
	(16.5) 3.80	(14) 3.98	(13) 3.97	(13) 3.91	(23) 3.38	(26) 3.45	(20) 3.73	(24) 3.52	(13.5) 3.72	(10.5) 3.79	(11) 3.77	(21) 3.94	(21) 3.32	(19) 3.57	(21) 3.61	(16) 3.59	(14) 3.79	(16) 3.69
	(14) 3.88	(20.5) 3.40	(23.5) 3.71	(20) 3.66	(11.5) 3.97	(11) 4.30	(11) 4.07	(11) 4.11	(20) 3.36	(23) 2.73	(22) 3.05	(23) 3.87	(18.5) 3.56	(25) 3.04	(23) 3.49	(23) 3.15	(20.5) 3.54	(20) 3.39
	(24) 3.63	(23) 3.38	(30) 3.31	(25.5) 3.44	(22) 3.41	(28) 3.18	(27) 3.11	(27) 3.23	(23) 2.97	(21) 2.89	(24) 2.93	(29) 3.39	(24) 3.17	(27) 2.96	(25.5) 3.17	(24) 3.11	(22) 3.29	(23) 3.20
ary procedure)	(37) 2.75	(38) 2.40	(38) 2.80	(38) 2.65	(40) 1.71	(40) 2.03	(40) 1.64	(40) 1.79	(39.5) 1.85	(37.5) 1.92	(38) 1.89	(39) 2.10	(39) 1.72	(36) 1.78	(40) 1.87	(39) 2.07	(37) 2.57	(38) 2.33
	(18) 3.75	(12) 4.05	(19) 3.85	(14) 3.88	(13.5) 3.91	(22) 3.88	(24) 3.63	(19) 3.81	(10) 3.79	(7) 4.05	(7) 3.92	(12) 4.35	(6) 4.40	(6.5) 4.35	(8) 4.37	(7.5) 4.00	(3.5) 4.11	(5) 4.05
	(39) 2.38	(40) 2.10	(40) 2.49	(40) 2.32	(36.5) 2.00	(38) 2.15	(39) 1.78	(38) 1.98	(39.5) 1.85	(39) 1.84	(39) 1.95	(38) 2.42	(40) 1.60	(34) 1.96	(38) 1.99	(40) 1.96	(40) 2.11	(40) 2.04
	(10) 4.03	(15) 3.93	(15) 3.91	(11) 3.95	(27.5) 3.18	(25) 3.48	(26) 3.25	(26) 3.31	(7) 3.87	(10.5) 3.79	(10) 3.83	(13) 4.32	(22.5) 3.24	(21) 3.43	(19) 3.66	(15) 3.67	(10.5) 3.86	(14.5) 3.76
	(8) 4.15	(10.5) 4.07	(9) 4.09	(8) 4.10	(10) 4.03	(11) 4.30	(10) 4.15	(9.5) 4.16	(15) 3.69	(5) 4.13	(8) 3.91	(4.5) 4.68	(8) 4.36	(8.5) 4.26	(6) 4.43	(10) 3.85	(17) 3.68	(14.5) 3.76
	(4)	(1)	(3)	(3)	(5)	(7)	(3)	(6)	(2)	(4)	(2)	(8)	(7)	(6.5)	(7)	(4.5)	(5)	(4)

	3.80	4.00	4.05	3.94	3.79	4.09	3.74	3.87	3.87	3.42	3.55	4.45	3.56	3.61
Adapt spoken word usage to the job situation	(11) 4.00	(16) 3.88	(8) 4.14	(9) 4.00	(13.5) 3.91	(14) 4.15	(15.5) 3.85	(13) 3.97	(9) 3.82	(9) 3.87	(9) 3.85	(7) 4.32	(11) 4.04	(8.5) 4.26
Use the voice effectively and pronunciation of words correctly	(22) 3.65	(32) 3.02	(15) 3.91	(23) 3.52	(16) 3.74	(20) 3.97	(22.5) 3.67	(20) 3.79	(26) 2.85	(25) 2.68	(26) 2.77	(18) 4.03	(13) 3.84	(13) 3.96
Maintain confidentiality concerning job-related information	(1) 4.55	(4) 4.38	(6) 4.17	(4) 4.36	(1) 4.58	(1) 4.70	(1) 4.69	(1) 4.66	(11.5) 3.77	(20) 3.05	(17.5) 3.41	(1) 4.84	(1) 4.76	(1.5) 4.87
Use the telephone effectively	(12) 3.95	(25.5) 3.29	(6) 4.17	(17) 3.80	(8) 4.26	(9) 4.33	(7) 4.22	(8) 4.27	(21) 3.31	(26) 2.66	(23) 2.99	(18) 4.03	(2) 4.52	(11.5) 4.04
Respond to non-verbal communication (Body language)	(40) 2.20	(39) 2.17	(32.5) 3.27	(39) 2.54	(30) 2.53	(31.5) 2.63	(29) 2.60	(30) 2.59	(38) 1.97	(40) 1.68	(40) 1.83	(20) 3.97	(22.5) 3.24	(10) 4.09
Complete job-related forms (Applications, purchase requisitions, invoices, sales receipts, orders)	(9) 4.08	(27) 3.21	(12) 4.00	(18) 3.76	(18) 3.62	(21) 3.96	(14) 3.89	(18) 3.82	(22) 3.28	(18) 3.19	(19) 3.24	(32) 3.07	(26.5) 3.08	(22) 3.35
Handle receptions and introductions competently	(27) 3.48	(33.5) 2.98	(10) 4.06	(24) 3.50	(25.5) 3.21	(18) 4.06	(22.5) 3.67	(22) 3.65	(34) 2.54	(27) 2.64	(28) 2.59	(26) 3.55	(20) 3.38	(28) 2.87
Remember essential information	(2) 4.38	(3) 4.43	(1) 4.43	(1.5) 4.41	(6) 4.38	(3) 4.67	(5.5) 4.26	(4.5) 4.44	(4) 4.18	(2) 4.27	(3) 4.23	(3) 4.74	(5) 4.42	(5) 4.52
Take notes effectively	(22) 3.65	(10.5) 4.07	(26) 3.54	(19) 3.75	(19) 3.58	(11) 4.30	(15.5) 3.85	(15) 3.91	(8) 3.85	(18) 3.19	(16) 3.52	(18) 4.03	(17) 3.67	(23) 3.17
Write a business letter	(19.5) 3.70	(35) 2.79	(20.5) 3.80	(27) 3.43	(24) 3.32	(16) 4.09	(21) 3.71	(21) 3.71	(31) 2.64	(36) 2.11	(33.5) 2.38	(40) 2.08	(32) 2.33	(39) 1.57
Use abbreviations and numbers in report writing	(35) 3.00	(37) 2.67	(39) 2.71	(37) 2.79	(29) 2.85	(30) 2.70	(31) 2.42	(29) 2.66	(29) 2.72	(31) 2.28	(30) 2.50	(30) 3.19	(28) 2.96	(30) 2.50
Give instructions orally	(15) 3.83	(17) 3.83	(20.5) 3.80	(16) 3.82	(27.5) 3.18	(23) 3.67	(25) 3.37	(25) 3.41	(18) 3.51	(12) 3.62	(13.5) 3.57	(14) 4.19	(14) 3.83	(11.5) 4.04
Understand oral instructions	(6) 4.20	(7) 4.26	(4) 4.23	(5.5) 4.23	(4) 4.44	(5) 4.64	(5.5) 4.26	(3) 4.45	(3) 4.21	(3) 4.19	(4) 4.20	(4.5) 4.68	(4) 4.46	(6) 4.61
Interpret and explain graphic illustrations (graphs, charts, tables)	(31.5) 3.18	(25.5) 3.29	(34.5) 3.26	(32) 3.24	(35) 2.09	(33) 2.44	(34) 2.19	(34) 2.24	(17) 3.62	(18) 3.19	(17.5) 3.41	(33) 3.06	(34) 2.04	(35) 1.87
Proofread and edit written communications	(28) 3.43	(30) 3.12	(25) 3.57	(29) 3.37	(20) 3.56	(19) 4.00	(8.5) 4.19	(14) 3.92	(27) 2.79	(34.5) 2.19	(31) 2.49	(36) 2.53	(31) 2.38	(40) 1.48
Write a general report	(31.5) 3.18	(20.5) 3.40	(31) 3.29	(30) 3.29	(31) 2.29	(29) 2.72	(30) 2.48	(31) 2.50	(32) 2.62	(30) 2.31	(32) 2.47	(34) 2.97	(36) 1.91	(37.5) 1.74
Work cooperatively with other employees	(3) 4.35	(2) 4.48	(2) 4.40	(1.5) 4.41	(2) 4.50	(3) 4.67	(2) 4.59	(2) 4.59	(1) 4.51	(1) 4.41	(1) 4.46	(2) 4.81	(3) 4.50	(1.5) 4.87
Organize and lead a conference	(36) 2.80	(33.5) 2.98	(27.5) 3.49	(36) 3.09	(38) 1.97	(35) 2.36	(37) 1.93	(37) 2.09	(37) 2.26	(33) 2.22	(36) 2.24	(31) 3.10	(38) 1.75	(31.5) 2.30
Question individuals to clarify information	(19.5) 3.70	(5) 4.31	(17.5) 3.89	(10) 3.96	(21) 3.53	(24) 3.61	(17) 3.78	(23) 3.66	(11.5) 3.77	(15) 3.41	(12) 3.59	(15) 4.16	(12) 3.88	(17) 3.65
Use Grammar correctly	(22) 3.65	(28) 3.19	(17.5) 3.89	(21) 3.57	(9) 4.12	(8) 4.42	(12.5) 3.93	(9.5) 4.16	(24) 2.95	(24) 2.70	(25) 2.83	(16) 4.10	(15) 3.79	(20) 3.52
Spell correctly	(13) 3.90	(31) 3.07	(23.5) 3.71	(22) 3.56	(7) 4.36	(3) 4.67	(4) 4.30	(4.5) 4.44	(19) 3.41	(22) 2.81	(20) 3.11	(10) 4.42	(10) 4.25	(16) 3.70
Punctuate	(26) 3.50	(36) 2.78	(27.5) 3.49	(31) 3.25	(11.5) 3.97	(13) 4.27	(12.5) 3.93	(12) 4.06	(33) 2.56	(34.5) 2.19	(33.5) 2.38	(28) 3.43	(26.5) 3.08	(31.5) 2.30
Express ideas clearly and concisely	(5) 4.28	(8) 4.24	(6) 4.17	(5.5) 4.23	(17) 3.65	(16) 4.09	(18.5) 3.74	(17) 3.83	(6) 3.97	(8) 3.95	(6) 3.96	(11) 4.39	(16) 3.68	(14) 3.91
Present technical data orally	(29) 3.35	(18) 3.71	(32.5) 3.27	(25.5) 3.44	(33.5) 2.18	(31.5) 2.63	(34) 2.19	(32.5) 2.33	(25) 2.92	(16) 3.22	(21) 3.07	(27) 3.45	(30) 2.40	(24) 3.09
Read to comprehend job-related and technical materials	(25) 3.58	(9) 4.17	(22) 3.79	(15) 3.86	(25.5) 3.21	(27) 3.25	(28) 2.89	(28) 3.12	(13.5) 3.72	(13.5) 3.42	(13.5) 3.57	(22) 3.90	(25) 3.13	(15) 3.74
Lead a problem-solving or informational discussion group	(38) 2.73	(23) 3.38	(36) 3.21	(34.5) 3.10	(39) 1.82	(39) 2.13	(38) 1.85	(39) 1.93	(36) 2.28	(32) 2.25	(35) 2.27	(35) 2.74	(37) 1.80	(33) 2.17
Participate in a problem-solving or informational discussion group	(33) 3.10	(19) 3.69	(29) 3.47	(28) 3.42	(32) 2.21	(34) 2.41	(32) 2.36	(32.5) 2.33	(30) 2.69	(28) 2.57	(27) 2.63	(24) 3.77	(29) 2.46	(29) 2.83
Listen for main ideas	(16.5) 3.80	(14) 3.98	(13) 3.97	(13) 3.91	(23) 3.38	(26) 3.45	(20) 3.73	(24) 3.52	(13.5) 3.72	(10.5) 3.79	(11) 3.77	(21) 3.94	(21) 3.32	(19) 3.57
Prepare written work neatly	(14) 3.88	(20.5) 3.40	(23.5) 3.71	(20) 3.66	(11.5) 3.97	(11) 4.30	(11) 4.07	(11) 4.11	(20) 3.36	(23) 2.73	(22) 3.05	(23) 3.67	(18.5) 3.56	(25) 3.04
Skim for pertinent information	(24) 3.63	(23) 3.38	(30) 3.31	(25.5) 3.44	(22) 3.41	(26) 3.18	(27) 3.11	(27) 3.23	(23) 2.97	(21) 2.89	(24) 2.93	(29) 3.39	(24) 3.17	(27) 2.96
Lead and participate in a business meeting (Parliamentary procedure)	(37) 2.75	(38) 2.40	(38) 2.80	(38) 2.65	(40) 1.71	(40) 2.03	(40) 1.64	(40) 1.79	(39.5) 1.85	(37.5) 1.92	(38) 1.89	(39) 2.10	(39) 1.72	(36) 1.78
Understand occupational terminology	(18) 3.75	(12) 4.05	(19) 3.85	(14) 3.88	(13.5) 3.91	(22) 3.88	(24) 3.63	(19) 3.81	(10) 3.79	(7) 4.05	(7) 3.92	(12) 4.35	(6) 4.40	(6.5) 4.35
Read aloud effectively	(39) 2.38	(40) 2.10	(40) 2.49	(40) 2.32	(36.5) 2.00	(38) 2.15	(39) 1.78	(38) 1.98	(39.5) 1.85	(39) 1.84	(39) 1.85	(38) 2.42	(40) 1.60	(34) 1.96
Recognize fact from opinion	(10) 4.03	(15) 3.93	(15) 3.91	(11) 3.95	(27.5) 3.18	(25) 3.48	(26) 3.26	(26) 3.31	(7) 3.87	(10.5) 3.79	(10) 3.83	(13) 4.32	(22.5) 3.24	(21) 3.43
Listen tactfully	(8) 4.15	(10.5) 4.07	(9) 4.09	(8) 4.10	(10) 4.03	(11) 4.30	(10) 4.15	(9.5) 4.16	(15) 3.69	(5) 4.13	(8) 3.91	(6.5) 4.68	(8) 4.36	(8.5) 4.26
Give attention to details	(4) 4.30	(1) 4.62	(3) 4.29	(3) 4.40	(5) 4.41	(7) 4.48	(3) 4.33	(6) 4.41	(2) 4.36	(4) 4.18	(2) 4.27	(8) 4.47	(7) 4.38	(6.5) 4.35
Adjust to a variable work load	(7) 4.18	(6) 4.30	(15) 3.91	(7) 4.13	(3) 4.47	(6) 4.52	(8.5) 4.19	(7) 4.38	(5) 4.00	(6) 4.08	(5) 4.04	(6) 4.60	(9) 4.33	(3) 4.78
Participate in a conference	(30) 3.20	(29) 3.17	(34.5) 3.26	(33) 3.21	(33.5) 2.18	(36) 2.31	(34) 2.19	(35) 2.23	(28) 2.77	(29) 2.36	(29) 2.57	(25) 3.60	(33) 2.29	(26) 3.00
Write a formal, documented report	(34) 3.05	(23) 3.38	(37) 2.88	(34.5) 3.10	(36.5) 2.00	(37) 2.22	(36) 2.08	(36) 2.10	(35) 2.44	(37.5) 1.92	(37) 2.20	(37) 2.47	(35) 1.96	(37.5) 1.74
Means for Programs and Program Clusters	3.61	3.54	3.69	3.61	3.34	3.60	3.37	3.44	3.23	3.03	3.13	3.76	3.29	3.30

*Rank Order

**Mean response on a 5-point Likert scale when 5 points were awarded for each Extremely Important response, 4 points for Very Important, 3 points for Important, 2 points for Moderately Important, and 1 point for Not Important.

***Rank Order determined by Program Cluster means

****Program Cluster Means of Program Means

	4.00	3.88	4.14	4.00	3.91	4.15	3.85	3.97	3.82	3.87	3.85	4.52	4.04	4.26	4.27	3.89	3.89	3.89
ectly	(22) 3.65	(32) 3.02	(15) 3.91	(23) 3.52	(16) 3.74	(20) 3.97	(22.5) 3.67	(20) 3.79	(26) 2.85	(25) 2.68	(26) 2.77	(18) 4.03	(13) 3.84	(13) 3.96	(14) 3.94	(25) 3.04	(33) 3.00	(28.5) 3.02
n	(1) 4.55	(4) 4.38	(6) 4.17	(4) 4.36	(1) 4.58	(1) 4.70	(1) 4.69	(1) 4.66	(11.5) 3.77	(20) 3.05	(27.5) 3.41	(1) 4.84	(1) 4.76	(1.5) 4.87	(1) 4.82	(12) 3.79	(10.5) 3.86	(11) 3.82
	(12) 3.95	(25.5) 3.29	(6) 4.17	(17) 3.80	(8) 4.26	(9) 4.33	(7) 4.22	(8) 4.27	(21) 3.31	(26) 2.66	(23) 2.99	(18) 4.03	(2) 4.52	(11.5) 4.04	(10) 4.20	(19) 3.43	(23) 3.28	(21) 3.36
	(40) 2.20	(39) 2.17	(32.5) 3.27	(39) 2.54	(39) 2.53	(31.5) 2.63	(29) 2.60	(30) 2.59	(38) 1.97	(40) 1.68	(40) 1.83	(20) 3.97	(22.5) 3.24	(10) 4.09	(18) 3.77	(38) 2.29	(39) 2.12	(39) 2.20
isitions,	(9) 4.08	(27) 3.21	(12) 4.00	(18) 3.76	(18) 3.62	(21) 3.94	(14) 3.89	(18) 3.82	(22) 3.28	(18) 3.19	(19) 3.24	(32) 3.07	(26.5) 3.08	(22) 3.35	(25.5) 3.17	(18) 3.46	(32) 3.04	(22) 3.25
	(27) 3.48	(33.5) 2.98	(10) 4.06	(24) 3.50	(25.5) 3.21	(18) 4.06	(22.5) 3.67	(22) 3.65	(34) 2.54	(27) 2.64	(28) 2.59	(26) 3.55	(20) 3.38	(28) 2.87	(24) 3.27	(31) 2.68	(36) 2.67)	(35) 2.67
	(2) 4.38	(3) 4.43	(1) 4.43	(1.5) 4.41	(6) 4.38	(3) 4.67	(5.5) 4.26	(4.5) 4.44	(4) 4.18	(2) 4.27	(3) 4.23	(3) 4.74	(5) 4.42	(5) 4.52	(5) 4.56	(3) 4.29	(2) 4.18	(3) 4.23
	(22) 3.65	(10.5) 4.07	(26) 3.54	(19) 3.75	(19) 3.58	(11) 4.30	(15.5) 3.85	(15) 3.91	(8) 3.85	(18) 3.19	(16) 3.52	(18) 4.03	(17) 3.67	(23) 3.17	(20) 3.62	(20) 3.32	(18) 3.67	(18) 3.49
	(19.5) 3.70	(35) 2.79	(20.5) 3.80	(27) 3.43	(24) 3.32	(16) 4.09	(21) 3.71	(21) 3.71	(31) 2.64	(36) 2.11	(33.5) 2.38	(40) 2.03	(32) 2.33	(39) 1.57	(39) 1.98	(28.5) 2.82	(25) 3.22	(28.5) 3.02
	(35) 3.00	(37) 2.67	(39) 2.71	(37) 2.79	(29) 2.85	(30) 2.70	(31) 2.42	(29) 2.66	(29) 2.72	(31) 2.28	(30) 2.50	(30) 3.19	(28) 2.96	(30) 2.50	(31) 2.88	(37) 2.36	(38) 2.33	(37) 2.35
	(15) 3.83	(17) 3.53	(20.5) 3.80	(16) 3.82	(27.5) 3.18	(23) 3.67	(25) 3.37	(25) 3.41	(18) 3.51	(12) 3.62	(13.5) 3.57	(14) 4.19	(14) 3.83	(11.5) 4.04	(12) 4.02	(14) 3.75	(12) 3.82	(13) 3.79
	(6) 4.20	(7) 4.26	(4) 4.23	(5.5) 4.23	(4) 4.44	(5) 4.64	(5.5) 4.26	(3) 4.45	(3) 4.21	(3) 4.19	(4) 4.20	(4.5) 4.68	(4) 4.46	(4) 4.61	(3) 4.58	(2) 4.39	(3.5) 4.11	(2) 4.25
, tables)	(31.5) 3.18	(25.5) 3.29	(34.5) 3.26	(32) 3.24	(35) 2.09	(33) 2.44	(34) 2.19	(34) 2.24	(17) 3.62	(18) 3.19	(17.5) 3.41	(33) 3.06	(34) 2.04	(35) 1.87	(33) 2.32	(17) 3.57	(14) 3.79	(17) 3.68
	(28) 3.43	(30) 3.12	(25) 3.57	(29) 3.37	(20) 3.56	(19) 4.00	(8.5) 4.19	(14) 3.92	(27) 2.79	(34.5) 2.19	(31) 2.49	(36) 2.53	(31) 2.38	(40) 1.48	(36) 2.13	(28.5) 2.82	(34) 2.93	(32.5) 2.88
	(31.5) 3.18	(20.5) 3.40	(31) 3.29	(30) 3.29	(31) 2.29	(29) 2.72	(30) 2.48	(31) 2.50	(32) 2.62	(30) 2.31	(32) 2.47	(34) 2.97	(36) 1.91	(37.5) 1.74	(35) 2.21	(27) 2.86	(26) 3.21	(27) 3.04
	(3) 4.35	(2) 4.48	(2) 4.40	(1.5) 4.41	(2) 4.50	(3) 4.67	(2) 4.59	(2) 4.59	(1) 4.51	(1) 4.41	(1) 4.46	(2) 4.82	(3) 4.50	(1.5) 4.87	(2) 4.73	(1) 4.64	(1) 4.32	(1) 4.48
	(36) 2.80	(33.5) 2.98	(27.5) 3.49	(36) 3.09	(38) 1.97	(35) 2.36	(37) 1.93	(37) 2.09	(37) 2.26	(33) 2.22	(36) 2.24	(31) 3.10	(38) 1.75	(31.5) 2.30	(32) 2.38	(33.5) 2.61	(29) 3.14	(32.5) 2.88
	(19.5) 3.70	(5) 4.31	(17.5) 3.89	(10) 3.96	(21) 3.53	(24) 3.61	(17) 3.78	(23) 3.64	(11.5) 3.77	(15) 3.41	(12) 3.59	(15) 4.16	(12) 3.88	(17) 3.65	(15) 3.90	(11) 3.82	(14) 3.79	(12) 3.80
	(22) 3.65	(28) 3.19	(17.5) 3.89	(21) 3.57	(9) 4.12	(8) 4.42	(12.5) 3.93	(9.5) 4.16	(24) 2.95	(24) 2.70	(25) 2.83	(16) 4.10	(15) 3.79	(20) 3.52	(17) 3.80	(22) 3.21	(29) 3.14	(24) 3.18
	(13) 3.90	(31) 3.07	(23.5) 3.71	(22) 3.56	(7) 4.36	(3) 4.67	(4) 4.30	(4.5) 4.44	(19) 3.41	(22) 2.81	(20) 3.11	(10) 4.42	(10) 4.25	(16) 3.70	(11) 4.12	(26) 2.93	(24) 3.25	(25.5) 3.09
	(26) 3.50	(36) 2.78	(27.5) 3.49	(31) 3.25	(11.5) 3.97	(13) 4.27	(12.5) 3.93	(12) 4.06	(33) 2.56	(34.5) 2.19	(33.5) 2.38	(28) 3.43	(26.5) 3.08	(31.5) 2.30	(30) 2.94	(35) 2.56	(35) 2.70	(36) 2.58
	(5) 4.28	(8) 4.24	(6) 4.17	(5.5) 4.23	(17) 3.65	(16) 4.09	(18.5) 3.74	(17) 3.83	(6) 3.97	(8) 3.95	(6) 3.96	(11) 4.39	(16) 3.68	(14) 3.91	(13) 3.99	(7.5) 4.00	(6.5) 3.96	(7) 3.98
	(29) 3.35	(18) 3.71	(32.5) 3.27	(25.5) 3.44	(33.5) 2.18	(31.5) 2.63	(34) 2.19	(32.5) 2.33	(25) 2.92	(16) 3.22	(21) 3.07	(27) 3.45	(30) 2.40	(24) 3.09	(28) 2.98	(21) 3.30	(19) 3.61	(19) 3.45
	(25) 3.58	(9) 4.17	(22) 3.79	(15) 3.84	(25.5) 3.21	(27) 3.25	(28) 2.89	(28) 3.12	(13.5) 3.72	(13.5) 3.42	(13.5) 3.57	(22) 3.90	(25) 3.13	(15) 3.74	(22) 3.59	(6) 4.07	(6.5) 3.96	(6) 4.02
p	(38) 2.73	(23) 3.38	(36) 3.21	(34.5) 3.10	(39) 1.82	(39) 2.13	(38) 1.85	(39) 1.93	(36) 2.28	(32) 2.25	(35) 2.27	(35) 2.74	(37) 1.80	(33) 2.17	(34) 2.24	(36) 2.41	(29) 3.14	(34) 2.78
ion group	(33) 3.10	(19) 3.69	(29) 3.47	(28) 3.42	(32) 2.21	(34) 2.41	(32) 2.36	(32.5) 2.33	(30) 2.69	(28) 2.57	(27) 2.63	(24) 3.77	(29) 2.46	(29) 2.83	(27) 3.02	(32) 2.63	(20.5) 3.54	(25.5) 3.09
	(16.5) 3.80	(14) 3.98	(13) 3.97	(13) 3.91	(23) 3.38	(26) 3.45	(20) 3.73	(24) 3.52	(13.5) 3.72	(10.5) 3.79	(11) 3.77	(21) 3.94	(21) 3.32	(19) 3.57	(21) 3.61	(16) 3.59	(14) 3.79	(16) 3.69
	(14) 3.88	(20.5) 3.40	(23.5) 3.71	(20) 3.66	(11.5) 3.97	(11) 4.30	(11) 4.07	(11) 4.11	(20) 3.36	(23) 2.73	(22) 3.05	(23) 3.87	(18.5) 3.56	(25) 3.04	(23) 3.49	(23) 3.15	(20.5) 3.54	(20) 3.39
	(24) 3.63	(23) 3.38	(30) 3.31	(25.5) 3.44	(22) 3.41	(28) 3.18	(27) 3.11	(27) 3.23	(23) 2.97	(21) 2.89	(24) 2.93	(29) 3.39	(24) 3.17	(27) 2.96	(25.5) 3.17	(24) 3.11	(22) 3.29	(23) 3.20
y procedure)	(37) 2.75	(38) 2.40	(38) 2.80	(38) 2.65	(40) 1.71	(40) 2.03	(40) 1.64	(40) 1.79	(39.5) 1.85	(37.5) 1.92	(38) 1.89	(39) 2.10	(39) 1.72	(36) 1.78	(40) 1.87	(39) 2.07	(37) 2.57	(38) 2.33
	(18) 3.75	(12) 4.05	(19) 3.85	(14) 3.88	(13.5) 3.91	(22) 3.88	(24) 3.63	(19) 3.81	(10) 3.79	(7) 4.05	(7) 3.92	(12) 4.35	(6) 4.40	(6.5) 4.35	(8) 4.37	(7.5) 4.00	(3.5) 4.11	(5) 4.05
	(39) 2.38	(40) 2.10	(40) 2.49	(40) 2.32	(36.5) 2.00	(38) 2.15	(39) 1.78	(38) 1.98	(39.5) 1.85	(39) 1.84	(39) 1.85	(38) 2.42	(40) 1.60	(34) 1.96	(38) 1.99	(40) 1.96	(40) 2.11	(40) 2.04
	(10) 4.03	(15) 3.93	(15) 3.91	(11) 3.95	(27.5) 3.18	(25) 3.48	(26) 3.26	(26) 3.31	(7) 3.87	(10.5) 3.79	(10) 3.83	(13) 4.32	(22.5) 3.24	(21) 3.43	(19) 3.66	(15) 3.67	(10.5) 3.86	(14.5) 3.76
	(8) 4.15	(10.5) 4.07	(9) 4.09	(8) 4.10	(10) 4.03	(11) 4.30	(10) 4.15	(9.5) 4.16	(15) 3.69	(5) 4.13	(8) 3.91	(4.5) 4.68	(8) 4.36	(8.5) 4.26	(6) 4.43	(10) 3.85	(17) 3.68	(14.5) 3.76
	(4) 4.30	(1) 4.62	(3) 4.22	(3) 4.40	(5) 4.41	(7) 4.48	(3) 4.33	(6) 4.41	(2) 4.36	(4) 4.18	(2) 4.27	(8) 4.47	(7) 4.38	(6.5) 4.35	(7) 4.40	(4.5) 4.18	(5) 4.07	(4) 4.13
	(7) 4.18	(6) 4.30	(15) 3.91	(7) 4.13	(3) 4.47	(6) 4.52	(8.5) 4.19	(7) 4.38	(5) 4.00	(6) 4.08	(5) 4.04	(6) 4.60	(9) 4.33	(3) 4.78	(4) 4.57	(4.5) 4.18	(16) 3.75	(8) 3.96
	(30) 3.20	(29) 3.17	(34.5) 3.26	(33) 3.21	(33.5) 2.18	(36) 2.31	(34) 2.19	(35) 2.23	(28) 2.77	(29) 2.36	(29) 2.57	(25) 3.60	(33) 2.29	(26) 3.00	(29) 2.96	(33.5) 2.61	(27) 3.18	(31) 2.89
	(34) 3.05	(23) 3.38	(37) 2.88	(34.5) 3.10	(36.5) 2.00	(37) 2.22	(36) 2.08	(36) 2.10	(35) 2.44	(37.5) 1.92	(37) 2.20	(37) 2.47	(35) 1.96	(37.5) 1.74	(37) 2.06	(30) 2.75	(31) 3.07	(30) 2.91
	3.61	3.54	3.69	3.61	3.34	3.60	3.37	3.44	3.23	3.03	3.13	3.76	3.29	3.30	3.45	3.30	3.41	3.35

rt scale when 5 points were awarded for each
points for Very Important, 3 points for Important,
, and 1 point for Not Important.

***Rank Order determined by Program Cluster means

****Program Cluster Means are Means of Program Means

TABLES 4 THROUGH 16 ON THE FOLLOWING PAGES PRESENT THE RANK ORDER AND MEAN RESPONSE FOR EACH OF THE FORTY COMPETENCIES AS DETERMINED BY SUPERVISORS WITHIN EACH OF THE FOLLOWING THIRTEEN AREAS:

Table 4	Accounting (10-101)	p. 27
Table 5	Data Processing (10-107)	p. 28
Table 6	Marketing (10-104)	p. 29
Table 7	Clerk Typist (31-106)	p. 30
Table 8	Stenographer (31-106)	p. 31
Table 9	Secretarial Science (10-106)	p. 32
Table 10	Mechanical Drafting (31-421)	p. 33
Table 11	Machine Tool Operation (31-420/32-420)	p. 34
Table 12	Practical Nursing (31-510)	p. 35
Table 13	Medical Assistant (31-509)	p. 36
Table 14	Operating Room Assistant (31-512)	p. 37
Table 15	Electronics (10-605)	p. 38
Table 16	Mechanical Design (10-606)	p. 39

Table 4

RANK ORDER AND MEAN RESPONSE FOR EACH OF THE FORTY COMPETENCIES AS DETERMINED BY SUPERVISORS OF ACCOUNTING (10-101) GRADUATES

(1)*	4.55**	Maintain confidentiality concerning job-related information
(2)	4.38	Remember essential information
(3)	4.35	Work cooperatively with other employees
(4)	4.30	Give attention to details
(5)	4.28	Express ideas clearly and concisely
(6)	4.20	Understand oral instructions
(7)	4.18	Adjust to a variable work load
(8)	4.15	Listen tactfully
(9)	4.08	Complete job-related forms (Applications, purchase requisitions, invoices, sales receipts, orders)
(10)	4.03	Recognize fact from opinion
(11)	4.00	Adapt spoken word usage to the job situation
(12)	3.95	Use the telephone effectively
(13)	3.90	Spell correctly
(14)	3.88	Prepare written work neatly
(15)	3.83	Understand oral instructions
(16.5)	3.80	Adapt written word usage to the job situation
(16.5)	3.80	Listen for main ideas
(18)	3.75	Understand occupational terminology
(19.5)	3.70	Write a business letter
(19.5)	3.70	Question individuals to clarify information
(22)	3.65	Use the voice effectively and pronunciation of words correctly
(22)	3.65	Take notes effectively
(22)	3.65	Use Grammar correctly
(24)	3.63	Skim for pertinent information
(25)	3.58	Read to comprehend job-related and technical materials
(26)	3.50	Punctuate
(27)	3.48	Handle receptions and introductions competently
(28)	3.43	Proofread and edit written communications
(29)	3.35	Present technical data orally
(30)	3.20	Participate in a conference
(31.5)	3.18	Write a general report
(31.5)	3.18	Interpret and explain graphic illustrations (graphs, charts, tables)
(33)	3.10	Participate in a problem-solving or informational discussion group
(34)	3.05	Write a formal, documented report
(35)	3.00	Use abbreviations and numbers in report writing
(36)	2.80	Organize and lead a conference
(37)	2.75	Lead and participate in a business meeting (Parliamentary procedure)
(38)	2.73	Lead a problem-solving or informational discussion group
(39)	2.38	Read aloud effectively
(40)	2.20	Respond to nonverbal communication (Body language)

*Rank Order

**Mean response on a 5-point Likert scale when 5 points were awarded for each Extremely Important response, 4 points for Very Important, 3 points for Important, 2 points for Moderately Important, and 1 point for Not Important.

Table 5

RANK ORDER AND MEAN RESPONSE FOR EACH OF THE FORTY COMPETENCIES AS DETERMINED BY SUPERVISORS OF DATA PROCESSING (10-107) GRADUATES

(1)	4.62	Give attention to details
(2)	4.48	Work cooperatively with other employees
(3)	4.43	Remember essential information
(4)	4.38	Maintain confidentiality concerning job-related information
(5)	4.31	Question individuals to clarify information
(6)	4.30	Adjust to a variable work load
(7)	4.26	Understand oral instructions
(8)	4.24	Express ideas clearly and concisely
(9)	4.17	Read to comprehend job-related and technical materials
(10.5)	4.07	Take notes effectively
(10.5)	4.07	Listen tactfully
(12)	4.05	Understand occupational terminology
(13)	4.00	Adapt written word usage to the job situation
(14)	3.98	Listen for main ideas
(15)	3.93	Recognize fact from opinion
(16)	3.88	Adapt spoken word usage to the job situation
(17)	3.83	Give instructions orally
(18)	3.71	Present technical data orally
(19)	3.69	Participate in a problem-solving or informational discussion group
(20.5)	3.40	Write a general report
(20.5)	3.40	Prepare written work neatly
(23)	3.38	Lead a problem-solving or informational discussion group
(23)	3.38	Skim for pertinent information
(23)	3.38	Write a formal, documented report
(25.5)	3.29	Use the telephone effectively
(25.5)	3.29	Interpret and explain graphic illustrations (graphs, charts, tables)
(27)	3.21	Complete job-related forms (Applications, purchase requisitions, invoices, sales receipts, orders)
(28)	3.19	Use Grammar correctly
(29)	3.17	Participate in a conference
(30)	3.12	Proofread and edit written communications
(31)	3.07	Spell correctly
(32)	3.02	Use the voice effectively and pronunciation of words correctly
(33.5)	2.98	Handle receptions and introductions competently
(33.5)	2.98	Organize and lead a conference
(35)	2.79	Write a business letter
(36)	2.78	Punctuate
(37)	2.67	Use abbreviations and numbers in report writing
(38)	2.40	Lead and participate in a business meeting (Parliamentary procedure)
(39)	2.17	Respond to non-verbal communication (Body language)
(40)	2.10	Read aloud effectively

Table 6

RANK ORDER AND MEAN RESPONSE FOR EACH OF THE FORTY COMPETENCIES AS DETERMINED BY SUPERVISORS OF MARKETING (10-104) GRADUATES

(1)	4.43	Remember essential information
(2)	4.40	Work cooperatively with other employees
(3)	4.29	Give attention to details
(4)	4.23	Understand oral instructions
(6)	4.17	Maintain confidentiality concerning job-related information
(6)	4.17	Use the telephone effectively
(6)	4.17	Express ideas clearly and concisely
(8)	4.14	Adapt spoken word usage to the job situation
(9)	4.09	Listen tactfully
(10)	4.06	Handle receptions and introductions competently
(11)	4.03	Adapt written word usage to the job situation
(12)	4.00	Complete job-related forms (Applications, purchase requisitions, invoices, sales receipts, orders)
(13)	3.97	Listen for main ideas
(15)	3.91	Use the voice effectively and pronunciation of words correctly
(15)	3.91	Recognize fact from opinion
(15)	3.91	Adjust to a variable work load
(17.5)	3.89	Question individuals to clarify information
(17.5)	3.89	Use Grammar correctly
(19)	3.85	Understand occupational terminology
(20.5)	3.80	Write a business letter
(20.5)	3.80	Give instructions orally
(22)	3.79	Read to comprehend job-related and technical materials
(23.5)	3.71	Spell correctly
(23.5)	3.71	Prepare written work neatly
(25)	3.57	Proofread and edit written communications
(26)	3.54	Take notes effectively
(27.5)	3.49	Organize and lead a conference
(27.5)	3.49	Punctuate
(29)	3.47	Participate in a problem-solving or informational discussion group
(30)	3.31	Skim for pertinent information
(31)	3.29	Write a general report
(32.5)	3.27	Respond to non-verbal communication (Body language)
(32.5)	3.27	Present technical data orally
(34.5)	3.26	Interpret and explain graphic illustrations (graphs, charts, tables)
(34.5)	3.26	Participate in a conference
(36)	3.21	Lead a problem-solving or informational discussion group
(37)	2.88	Write a formal, documented report
(38)	2.80	Lead and participate in a business meeting (Parliamentary procedure)
(39)	2.71	Use abbreviations and numbers in report writing
(40)	2.49	Read aloud effectively

Table 7

RANK ORDER AND MEAN RESPONSE FOR EACH OF THE FORTY COMPETENCIES AS DETERMINED BY SUPERVISORS OF CLERK TYPIST (31-106) GRADUATES

(1)	4.58	Maintain confidentiality concerning job-related information
(2)	4.50	Work cooperatively with other employees
(3)	4.47	Adjust to a variable work load
(4)	4.44	Understand oral instructions
(5)	4.41	Give attention to details
(6)	4.38	Remember essential information
(7)	4.36	Spell correctly
(8)	4.26	Use the telephone effectively
(9)	4.12	Use Grammar correctly
(10)	4.03	Listen tactfully
(11.5)	3.97	Punctuate
(11.5)	3.97	Prepare written work neatly
(13.5)	3.91	Adapt spoken word usage to the job situation
(13.5)	3.91	Understand occupational terminology
(15)	3.79	Adapt written word usage to the job situation
(16)	3.74	Use the voice effectively and pronunciation of words correctly
(17)	3.65	Express ideas clearly and concisely
(18)	3.62	Complete job-related forms (Applications, purchase requisitions, invoices, sales receipts, orders)
(19)	3.58	Take notes effectively
(20)	3.56	Proofread and edit written communications
(21)	3.53	Question individuals to clarify information
(22)	3.41	Skim for pertinent information
(23)	3.38	Listen for main ideas
(24)	3.32	Write a business letter
(25.5)	3.21	Handle receptions and introductions competently
(25.5)	3.21	Read to comprehend job-related and technical materials
(27.5)	3.18	Give instructions orally
(27.5)	3.18	Recognize fact from opinion
(29)	2.85	Use abbreviations and numbers in report writing
(30)	2.53	Respond to non-verbal communication (Body language)
(31)	2.29	Write a general report
(32)	2.21	Participate in a problem-solving or informational discussion group
(33.5)	2.18	Present technical data orally
(33.5)	2.18	Participate in a conference
(35)	2.09	Interpret and explain graphic illustrations (graphs, charts, tables)
(36.5)	2.00	Read aloud effectively
(36.5)	2.00	Write a formal, documented report
(38)	1.97	Organize and lead a conference
(39)	1.82	Lead a problem-solving or informational discussion group
(40)	1.71	Lead and participate in a business meeting (Parliamentary procedure)

Table 8

RANK ORDER AND MEAN RESPONSE FOR EACH OF THE FORTY COMPETENCIES AS DETERMINED BY SUPERVISORS OF STENOGRAPHY (31-106) GRADUATES

(1)	4.70	Maintain confidentiality concerning job-related information
(3)	4.67	Remember essential information
(3)	4.67	Work cooperatively with other employees
(3)	4.67	Spell correctly
(5)	4.64	Understand oral instructions
(6)	4.52	Adjust to a variable work load
(7)	4.48	Give attential to details
(8)	4.42	Use Grammar correctly
(9)	4.33	Use the telephone effectively
(11)	4.30	Take notes effectively
(11)	4.30	Prepare written work neatly
(11)	4.30	Listen tactfully
(13)	4.27	Punctuate
(14)	4.15	Adapt spoken word usage to the job situation
(16)	4.09	Adapt written word usage to the job situation
(16)	4.09	Write a business letter
(16)	4.09	Express ideas clearly and concisely
(18)	4.06	Handle receptions and introductions competently
(19)	4.00	Proofread and edit written communications
(20)	3.97	Use the voice effectively and pronunciation of words correctly
(21)	3.94	Complete job-related forms (Applications, purchase requisitions, invoices, sales receipts, orders)
(22)	3.88	Understand occupational terminology
(23)	3.67	Give instructions orally
(24)	3.61	Question individuals to clarify information
(25)	3.48	Recognize fact from opinion
(26)	3.45	Listen for main ideas
(27)	3.25	Read to comprehend job-related and technical materials
(28)	3.18	Skim for pertinent information
(29)	2.72	Write a general report
(30)	2.70	Use abbreviations and numbers in report writing
(31.5)	2.63	Respond to non-verbal communication (Body language)
(31.5)	2.63	Present technical data orally
(33)	2.44	Interpret and explain graphic illustrations (graphs, charts, tables)
(34)	2.41	Participate in a problem-solving or informational discussion group
(35)	2.36	Organize and lead a conference
(36)	2.31	Participate in a conference
(37)	2.22	Write a formal, documented report
(38)	2.15	Read aloud effectively
(39)	2.13	Lead a problem-solving or informational discussion group
(40)	2.03	Lead and participate in a business meeting (Parliamentary procedure)

Table 9

RANK ORDER AND MEAN RESPONSE FOR EACH OF THE FORTY COMPETENCIES AS DETERMINED BY SUPERVISORS OF SECRETARIAL SCIENCE (10-106) GRADUATES

(1)	4.69	Maintain confidentiality concerning job-related information
(2)	4.59	Work cooperatively with other employees
(3)	4.33	Give attention to details
(4)	4.30	Spell correctly
(5.5)	4.26	Remember essential information
(5.5)	4.26	Understand oral instructions
(7)	4.22	Use the telephone effectively
(8.5)	4.19	Proofread and edit written communications
(8.5)	4.19	Adjust to a variable work load
(10)	4.15	Listen tactfully
(11)	4.07	Prepare written work neatly
(12.5)	3.93	Use Grammar correctly
(12.5)	3.93	Punctuate
(14)	3.89	Complete job-related forms (Applications, purchase requisitions, invoices, sales receipts, orders)
(15.5)	3.85	Adapt spoken word usage to the job situation
(15.5)	3.85	Take notes effectively
(17)	3.78	Question individuals to clarify information
(18.5)	3.74	Adapt written word usage to the job situation
(18.5)	3.74	Express ideas clearly and concisely
(20)	3.73	Listen for main ideas
(21)	3.71	Write a business letter
(22.5)	3.67	Use the voice effectively and pronunciation of words correctly
(22.5)	3.67	Handle receptions and introductions competently
(24)	3.63	Understand occupational terminology
(25)	3.37	Give instructions orally
(26)	3.26	Recognize fact from opinion
(27)	3.11	Skim for pertinent information
(28)	2.89	Read to comprehend job-related and technical materials
(29)	2.60	Respond to non-verbal communication (Body language)
(30)	2.48	Write a general report
(31)	2.42	Use abbreviations and numbers in report writing
(32)	2.36	Participate in a problem-solving or informational discussion group
(34)	2.19	Interpret and explain graphic illustrations (graphs, charts, tables)
(34)	2.19	Present technical data orally
(34)	2.19	Participate in a conference
(36)	2.08	Write a formal, documented report
(37)	1.93	Question individuals to clarify information
(38)	1.85	Lead a problem-solving or informational discussion group
(39)	1.78	Read aloud effectively
(40)	1.64	Lead and participate in a business meeting (Parliamentary procedure)

Table 10

RANK ORDER AND MEAN RESPONSE FOR EACH OF THE FORTY COMPETENCIES AS DETERMINED BY SUPERVISORS OF MECHANICAL DRAFTING (31-421) GRADUATES

(1)	4.51	Work cooperatively with other employees
(2)	4.36	Give attention to details
(3)	4.21	Understand oral instructions
(4)	4.18	Remember essential information
(5)	4.00	Adjust to a variable work load
(6)	3.97	Express ideas clearly and concisely
(7)	3.87	Recognize fact from opinion
(8)	3.85	Take notes effectively
(9)	3.82	Adapt spoken word usage to the job situation
(10)	3.79	Understand occupational terminology
(11.5)	3.77	Maintain confidentiality concerning job-related information
(11.5)	3.77	Question individuals to clarify information
(13.5)	3.72	Read to comprehend job-related and technical materials
(13.5)	3.72	Listen for main ideas
(15)	3.69	Listen tactfully
(16)	3.67	Adapt written word usage to the job situation
(17)	3.62	Interpret and explain graphic illustrations (graphs, charts, tables)
(18)	3.51	Give instructions orally
(19)	3.41	Spell correctly
(20)	3.36	Prepare written work neatly
(21)	3.31	Use the telephone effectively
(22)	3.28	Complete job-related forms (Applications, purchase requisitions, invoices, sales receipts, orders)
(23)	2.97	Skim for pertinent information
(24)	2.95	Use Grammar correctly
(25)	2.92	Present technical data orally
(26)	2.85	Use the voice effectively and pronunciation of words correctly
(27)	2.79	Proofread and edit written communications
(28)	2.77	Participate in a conference
(29)	2.72	Use abbreviations and numbers in report writing
(30)	2.69	Participate in a problem-solving or information discussion group
(31)	2.64	Write a business letter
(32)	2.62	Write a general report
(33)	2.56	Punctuate
(34)	2.54	Handle receptions and introductions competently
(35)	2.44	Write a formal, documented report
(36)	2.28	Lead a problem-solving or information discussion group
(37)	2.26	Organize and lead a conference
(38)	1.97	Respond to non-verbal communication (Body language)
(39.5)	1.85	Lead and participate in a business meeting (Parliamentary procedure)
(39.5)	1.85	Read aloud effectively

Table 11

RANK ORDER AND MEAN RESPONSE FOR EACH OF THE FORTY COMPETENCIES AS DETERMINED BY SUPERVISORS OF MACHINE TOOL OPERATION (31-420/32-420) GRADUATES

(1)	4.41	Work cooperatively with other employees
(2)	4.27	Remember essential information
(3)	4.19	Understand oral instructions
(4)	4.18	Give attention to details
(5)	4.13	Listen tactfully
(6)	4.08	Adjust to a variable work load
(7)	4.05	Understand occupational terminology
(8)	3.95	Express ideas clearly and concisely
(9)	3.87	Adapt spoken word usage to the job situation
(10.5)	3.79	Listen for main ideas
(10.5)	3.79	Recognize fact from opinion
(12)	3.62	Give instructions orally
(13.5)	3.42	Adapt written word usage to the job situation
(13.5)	3.42	Read to comprehend job-related and technical materials
(15)	3.41	Question individuals to clarify information
(16)	3.22	Present technical data orally
(18)	3.19	Complete job-related forms (Applications, purchase requisitions, invoices, sales receipts, orders)
(18)	3.19	Take notes effectively
(18)	3.19	Interpret and explain graphic illustrations (graphs, charts, tables)
(20)	3.05	Maintain confidentiality concerning job-related information
(21)	2.89	Skim for pertinent information
(22)	2.81	Spell correctly
(23)	2.73	Prepare written work neatly
(24)	2.70	Use Grammar correctly
(25)	2.68	Use the voice effectively and pronunciation of words correctly
(26)	2.66	Use the telephone effectively
(27)	2.64	Handle receptions and introductions competently
(28)	2.57	Participate in a problem-solving or informational discussion group
(29)	2.36	Participate in a conference
(30)	2.31	Write a general report
(31)	2.28	Use abbreviations and numbers in report writing
(32)	2.25	Lead a problem-solving or information discussion group
(33)	2.22	Organize and lead a conference
(34.5)	2.19	Proofread and edit written communications
(34.5)	2.19	Punctuate
(36)	2.11	Write a business letter
(37.5)	1.92	Lead and participate in a business meeting (Parliamentary procedure)
(37.5)	1.92	Write a formal, documented report
(39)	1.84	Read aloud effectively
(40)	1.68	Respond to non-verbal communication (Body language)

Table 12

RANK ORDER AND MEAN RESPONSE FOR EACH OF THE FORTY COMPETENCIES AS DETERMINED BY SUPERVISORS OF PRACTICAL NURSING (31-510) GRADUATES

(1)	4.84	Maintain confidentiality concerning job-related information
(2)	4.81	Work cooperatively with other employees
(3)	4.74	Remember essential information
(4.5)	4.68	Understand oral instructions
(4.5)	4.68	Listen tactfully
(6)	4.60	Adjust to a variable work load
(7)	4.52	Adapt spoken word usage to the job situation
(8)	4.47	Give attention to details
(9)	4.45	Adapt written word usage to the job situation
(10)	4.42	Spell correctly
(11)	4.39	Express ideas clearly and concisely
(12)	4.35	Understand occupational terminology
(13)	4.32	Recognize fact from opinion
(14)	4.19	Give instructions orally
(15)	4.16	Question individuals to clarify information
(16)	4.10	Use Grammar correctly
(18)	4.03	Use the voice effectively and pronunciation of words correctly
(18)	4.03	Use the telephone effectively
(18)	4.03	Take notes effectively
(20)	3.97	Respond to non-verbal communication (Body language)
(21)	3.94	Listen for main ideas
(22)	3.90	Read to comprehend job-related and technical materials
(23)	3.87	Prepare written work neatly
(24)	3.77	Participate in a problem-solving or informational discussion group
(25)	3.60	Participate in a conference
(26)	3.55	Handle receptions and introductions competently
(27)	3.45	Present technical data orally
(28)	3.43	Punctuate
(29)	3.39	Skim for pertinent information
(30)	3.19	Use abbreviations and numbers in report writing
(31)	3.10	Organize and lead a conference
(32)	3.07	Complete job-related forms (Applications, purchase requisitions, invoices, sales receipts, orders)
(33)	3.06	Interpret and explain graphic illustrations (graphs, charts, tables)
(34)	2.97	Write a general report
(35)	2.74	Lead a problem-solving or informational discussion group
(36)	2.53	Proofread and edit written communications
(37)	2.47	Write a formal, documented report
(38)	2.42	Read aloud effectively
(39)	2.10	Lead and participate in a business meeting (Parliamentary procedure)
(40)	2.03	Write a business letter

Give attention to details

Table 13

RANK ORDER AND MEAN RESPONSE FOR EACH OF THE FORTY COMPETENCIES AS DETERMINED BY SUPERVISORS OF MEDICAL ASSISTANT (31-509) GRADUATES

(1)	4.76	Maintain confidentiality concerning job-related information
(2)	4.52	Use the telephone effectively
(3)	4.50	Work cooperatively with other employees
(4)	4.46	Understand oral instructions
(5)	4.42	Remember essential information
(6)	4.40	Understand occupational terminology
(7)	4.38	Give attention to details
(8)	4.36	Listen tactfully
(9)	4.33	Adjust to a variable work load
(10)	4.25	Spell correctly
(11)	4.04	Adapt spoken word usage to the job situation
(12)	3.88	Question individuals to clarify information
(13)	3.84	Use the voice effectively and pronunciation of words correctly
(14)	3.83	Give instructions orally
(15)	3.79	Use Grammar correctly
(16)	3.68	Express ideas clearly and concisely
(17)	3.67	Take notes effectively
(18.5)	3.56	Adapt written word usage to the job situation
(18.5)	3.56	Prepare written work neatly
(20)	3.38	Handle receptions and introductions competently
(21)	3.32	Listen for main ideas
(22.5)	3.24	Respond to non-verbal communication (Body language)
(22.5)	3.24	Recognize fact from opinion
(24)	3.17	Skim for pertinent information
(25)	3.13	Read to comprehend job-related and technical materials
(26.5)	3.08	Complete job-related forms (Applications, purchase requisitions, invoices, sales receipts, orders)
(26.5)	3.08	Punctuate
(28)	2.96	Use abbreviations and numbers in report writing
(29)	2.46	Participate in a problem-solving or informational discussion group
(30)	2.40	Present technical data orally
(31)	2.38	Proofread and edit written communications
(32)	2.33	Write a business letter
(33)	2.29	Participate in a conference
(34)	2.04	Interpret and explain graphic illustrations (graphs, charts, tables)
(35)	1.96	Write a formal, documented report
(36)	1.91	Write a general report
(37)	1.80	Lead a problem-solving or informational discussion group
(38)	1.75	Organize and lead a conference
(39)	1.72	Lead and participate in a business meeting (Parliamentary procedure)
(40)	1.60	Read aloud effectively

Table 14

RANK ORDER AND MEAN RESPONSE FOR EACH OF THE FORTY COMPETENCIES AS DETERMINED BY SUPERVISORS OF OPERATING ROOM ASSISTANT (31-512) GRADUATES

(1.5)	4.87	Maintain confidentiality concerning job-related information
(1.5)	4.87	Work cooperatively with other employees
(3)	4.78	Adjust to a variable work load
(4)	4.61	Understand oral instructions
(5)	4.52	Remember essential information
(6.5)	4.35	Understand occupational terminology
(6.5)	4.35	Give attention to details
(8.5)	4.26	Adapt spoken word usage to the job situation
(8.5)	4.26	Listen tactfully
(10)	4.09	Respond to non-verbal communication (Body language)
(11.5)	4.04	Use the telephone effectively
(11.5)	4.04	Give instructions orally
(13)	3.96	Use the voice effectively and pronunciation of words correctly
(14)	3.91	Express ideas clearly and concisely
(15)	3.74	Read to comprehend job-related and technical materials
(16)	3.70	Spell correctly
(17)	3.65	Question individuals to clarify information
(18)	3.61	Adapt written word usage to the job situation
(19)	3.57	Listen for main ideas
(20)	3.52	Use Grammar correctly
(21)	3.43	Recognize fact from opinion
(22)	3.35	Complete job-related forms (Applications, purchase requisitions, invoices, sales receipts, orders)
(23)	3.17	Take notes effectively
(24)	3.09	Present technical data orally
(25)	3.04	Prepare written work neatly
(26)	3.00	Participate in a conference
(27)	2.96	Skim for pertinent information
(28)	2.87	Handle receptions and introductions competently
(29)	2.83	Participate in a problem-solving or informational discussion group
(30)	2.50	Use abbreviations and numbers in report writing
(31.5)	2.30	Organize and lead a conference
(31.5)	2.30	Punctuate
(33)	2.17	Lead a problem-solving or informational discussion group
(34)	1.96	Read aloud effectively
(35)	1.87	Interpret and explain graphic illustrations (graphs, charts, tables)
(36)	1.78	Lead and participate in a business meeting (Parliamentary procedure)
(37.5)	1.74	Write a general report
(37.5)	1.74	Write a formal, documented report
(39)	1.57	Write a business letter
(40)	1.48	Proofread and edit written communications

Table 15

RANK ORDER AND MEAN RESPONSE FOR EACH OF THE FORTY COMPETENCIES AS DETERMINED BY SUPERVISORS OF ELECTRONICS (10-605) GRADUATES

(1)	4.64	Work cooperatively with other employees
(2)	4.39	Understand oral instructions
(3)	4.29	Remember essential information
(4.5)	4.18	Give attention to details
(4.5)	4.18	Adjust to a variable work load
(6)	4.07	Read to comprehend job-related and technical materials
(7.5)	4.00	Express ideas clearly and concisely
(7.5)	4.00	Understand occupational terminology
(9)	3.89	Adapt spoken word usage to the job situation
(10)	3.85	Listen tactfully
(11)	3.82	Question individuals to clarify information
(12)	3.79	Maintain confidentiality concerning job-related information
(13)	3.78	Adapt written word usage to the job situation
(14)	3.75	Give instructions orally
(15)	3.67	Recognize fact from opinion
(16)	3.59	Listen for main ideas
(17)	3.57	Interpret and explain graphic illustrations (graphs, charts, tables)
(18)	3.46	Complete job-related forms (Applications, purchase requisitions, invoices, sales receipts, orders)
(19)	3.43	Use the telephone effectively
(20)	3.32	Take notes effectively
(21)	3.30	Present technical data orally
(22)	3.21	Use Grammar correctly
(23)	3.15	Prepare written work neatly
(24)	3.11	Skim for pertinent information
(25)	3.04	Use the voice effectively and pronunciation of words correctly
(26)	2.93	Spell correctly
(27)	2.86	Write a general report
(28.5)	2.82	Write a business letter
(28.5)	2.82	Proofread and edit written communications
(30)	2.75	Write a formal, documented report
(31)	2.68	Handle receptions and introductions competently
(32)	2.63	Participate in a problem-solving or informational discussion
(33.5)	2.61	Organize and lead a conference
(33.5)	2.61	Participate in a conference
(35)	2.56	Punctuate
(36)	2.41	Lead a problem-solving or informational discussion group
(37)	2.36	Use abbreviations and numbers in report writing
(38)	2.29	Respond to non-verbal communication (Body language)
(39)	2.07	Lead and participate in a business meeting (Parliamentary procedure)
(40)	1.96	Read aloud effectively

Table 16

RANK ORDER AND MEAN RESPONSE FOR EACH OF THE FORTY COMPETENCIES AS DETERMINED BY SUPERVISORS OF MECHANICAL DESIGN (10-606) GRADUATES

(1)	4.32	Work cooperatively with other employees
(2)	4.18	Remember essential information
(3.5)	4.11	Understand oral instructions
(3.5)	4.11	Understand occupational terminology
(5)	4.07	Give attention to details
(6.5)	3.96	Express ideas clearly and concisely
(6.5)	3.96	Read to comprehend job-related and technical materials
(8.5)	3.89	Adapt written word usage to the job situation
(8.5)	3.89	Adapt spoken word usage to the job situation
(10.5)	3.86	Maintain confidentiality concerning job-related information
(10.5)	3.86	Recognize fact from opinion
(12)	3.82	Give instructions orally
(14)	3.79	Interpret and explain graphic illustrations (graphs, charts, tables)
(14)	3.79	Question individuals to clarify information
(14)	3.79	Listen for main ideas
(16)	3.75	Adjust to a variable work load
(17)	3.68	Listen tactfully
(18)	3.67	Take notes effectively
(19)	3.61	Present technical data orally
(20.5)	3.54	Participate in a problem-solving or informational discussion group
(20.5)	3.54	Prepare written work neatly
(22)	3.29	Skim for pertinent information
(23)	3.28	Use the telephone effectively
(24)	3.25	Spell correctly
(25)	3.22	Write a business letter
(26)	3.21	Write a general report
(27)	3.18	Participate in a conference
(29)	3.14	Organize and lead a conference
(29)	3.14	Use Grammar correctly
(29)	3.14	Lead a problem-solving or informational discussion group
(31)	3.07	Write a formal, documented report
(32)	3.04	Complete job-related forms (Applications, purchase requisitions, invoices, sales receipts, orders)
(33)	3.00	Use the voice effectively and pronunciation of words correctly
(34)	2.93	Proofread and edit written communications
(35)	2.70	Punctuate
(36)	2.67	Handle receptions and introductions competently
(37)	2.57	Lead and participate in a business meeting (Parliamentary procedure)
(38)	2.33	Use abbreviations and numbers in report writing
(39)	2.12	Respond to non-verbal communication (Body language)
(40)	2.11	Read aloud effectively

TABLES 17 THROUGH 30 ON THE FOLLOWING PAGES PRESENT THE RANK ORDER AND MEAN RESPONSE FOR EACH OF THE FORTY COMPETENCIES AS DETERMINED BY GRADUATES OF THE FOLLOWING FOURTEEN AREAS:

Table 17	Accounting (10-101)	p. 41
Table 18	Data Processing (10-107)	p. 42
Table 19	Marketing (10-104)	p. 43
Table 20	Clerk Typist (31-106)	p. 44
Table 21	Stenographer (31-106)	p. 45
Table 22	Secretarial Science (10-106)	p. 46
Table 23	Mechanical Drafting (31-421)	p. 47
Table 24	Machine Tool Operation (31-420)	p. 48
Table 25	Machine Tool Operation (32-420)	p. 49
Table 26	Practical Nursing (31-510)	p. 50
Table 27	Medical Assistant (31-509)	p. 51
Table 28	Operating Room Assistant (31-512)	p. 52
Table 29	Electronics (10-605)	p. 53
Table 30	Mechanical Design (10-606)	p. 54

Table 17

RANK ORDER AND MEAN RESPONSE FOR EACH OF THE FORTY COMPETENCIES AS DETERMINED BY GRADUATES OF THE ACCOUNTING (10-101) PROGRAM

(1)*	4.66**	Remember essential information
(2)	4.49	Maintain confidentiality concerning job-related information
(3.5)	4.37	Work cooperatively with other employees
(3.5)	4.37	Understand occupational terminology
(5)	4.26	Adjust to a variable work load
(6)	4.23	Understand oral instructions
(7)	4.21	Give attention to details
(8)	4.17	Adapt spoken-word usage to the job situation
(9)	4.11	Prepare written work neatly
(10)	4.09	Listen tactfully
(11)	4.00	Express ideas clearly and concisely
(12.5)	3.94	Use the telephone effectively
(12.5)	3.94	Complete job-related forms (Applications, purchase requisitions, invoices, sales receipts, orders)
(14)	3.80	Question individuals to clarify information
(15)	3.71	Read to comprehend job-related and technical materials
(16)	3.66	Adapt written word usage to the job situation
(17)	3.59	Use the voice effectively and pronunciation of words correctly
(18)	3.57	Spell correctly
(19.5)	3.53	Use abbreviations and numbers in report writing
(19.5)	3.53	Present technical data orally
(21)	3.44	Listen for main ideas
(22)	3.43	Give instructions orally
(23.5)	3.37	Take notes effectively
(23.5)	3.37	Recognize fact from opinion
(25.5)	3.31	Use grammar correctly
(25.5)	3.31	Skim for pertinent information
(27)	3.14	Handle receptions and introductions competently
(28)	3.03	Interpret and explain graphic illustrations (graphs, charts, tables)
(29)	2.97	Write a business letter
(30)	2.86	Punctuate
(31.5)	2.83	Proofread and edit written communications
(31.5)	2.83	Write a general report
(33)	2.76	Participate in a conference
(34)	2.74	Participate in a problem-solving or information discussion group
(35)	2.54	Write a formal, documented report
(36)	2.46	Respond to non-verbal communication (Body language)
(37)	2.34	Organize and lead a conference
(38)	2.32	Lead a problem-solving or informational discussion group
(39)	2.03	Read aloud effectively
(40)	2.00	Lead and participate in a business meeting (Parliamentary procedure)

*Rank Order

**Mean Response on a 5-point Likert scale when 5 points were awarded for each Extremely Important response, 4 points for Very Important, 3 points for Important, 2 points for Moderately Important, and 1 point for Not Important.

Table 18

RANK ORDER AND MEAN RESPONSE FOR EACH OF THE FORTY COMPETENCIES AS DETERMINED BY GRADUATES OF THE DATA PROCESSING (10-107) PROGRAM

(1)	4.56	Work cooperatively with other employees
(2)	4.50	Remember essential information
(3)	4.44	Understand oral instructions
(4)	4.31	Understand occupational terminology
(5.5)	4.25	Give attention to details
(5.5)	4.25	Adjust to a variable work load
(7)	4.19	Express ideas clearly and concisely
(8)	4.06	Question individuals to clarify information
(9.5)	3.94	Maintain confidentiality concerning job-related information
(9.5)	3.94	Read to comprehend job-related and technical materials
(11)	3.84	Adapt spoken word usage to the job situation
(12)	3.75	Listen tactfully
(13)	3.69	Give instructions orally
(14)	3.48	Present technical data orally
(15.5)	3.44	Use Grammar correctly
(15.5)	3.44	Listen for main ideas
(17)	3.31	Spell correctly
(18)	3.28	Adapt written word usage to the job situation
(19)	3.25	Use the voice effectively and pronunciation of words correctly
(20)	3.22	Take notes effectively
(21.5)	3.19	Use the telephone effectively
(21.5)	3.19	Recognize fact from opinion
(23)	3.13	Skim for pertinent information
(24.5)	3.03	Interpret and explain graphic illustrations (graphs, charts, tables)
(24.5)	3.03	Complete job-related forms (Applications, purchase requisitions, invoices, sales receipts, orders)
(26)	3.00	Participate in a problem-solving or informational discussion group
(27)	2.94	Prepare written work neatly
(28)	2.88	Use abbreviations and numbers in report writing
(29)	2.78	Handle receptions and introductions competently
(30)	2.66	Participate in a conference
(31)	2.63	Lead a problem-solving or informational discussion group
(32)	2.59	Write a general report
(33)	2.56	Proofread and edit written communications
(34.5)	2.50	Write a formal, documented report
(34.5)	2.50	Organize and lead a conference
(36)	2.44	Punctuate
(37)	2.25	Respond to non-verbal communication (Body language)
(38)	2.22	Write a business letter
(39)	2.03	Read aloud effectively
(40)	2.00	Lead and participate in a business meeting (Parliamentary procedure)

Table 19

RANK ORDER AND MEAN RESPONSE FOR EACH OF THE FORTY COMPETENCIES AS DETERMINED BY GRADUATES OF THE MARKETING (10-104) PROGRAM

(1)	4.49	Complete job-related forms (Applications, purchase requisitions, invoices, sales receipts, orders)
(2)	4.47	Work cooperatively with other employees
(3)	4.42	Express ideas clearly and concisely
(4)	4.39	Understand oral instructions
(5.5)	4.38	Remember essential information
(5.5)	4.38	Adapt spoken word usage to the job situation
(7)	4.33	Adjust to a variable work load
(8)	4.31	Give attention to details
(9.5)	4.29	Listen tactfully
(9.5)	4.29	Understand occupational terminology
(11)	4.23	Use the voice effectively and pronunciation of words correctly
(12)	4.15	Maintain confidentiality concerning job-related information
(13)	4.11	Give instructions orally
(14)	4.10	Use the telephone effectively
(15)	4.00	Question individuals to clarify information
(16)	3.97	Use Grammar correctly
(17)	3.95	Listen for main ideas
(18)	3.79	Spell correctly
(19)	3.53	Recognize fact from opinion
(20.5)	3.50	Take notes effectively
(20.5)	3.50	Handle receptions and introductions competently
(22)	3.43	Read to comprehend job-related and technical materials
(23)	3.41	Adapt written word usage to the job situation
(24)	3.22	Present technical data orally
(25)	3.21	Skim for pertinent information
(26)	3.18	Prepare written work neatly
(27.5)	3.00	Organize and lead a conference
(27.5)	3.00	Participate in a conference
(29)	2.97	Punctuate
(30.5)	2.92	Participate in a problem-solving or informational discussion
(30.5)	2.92	Use abbreviations and numbers in report writing
(32)	2.84	Write a business letter
(33.5)	2.79	Lead a problem-solving or informational discussion group
(33.5)	2.79	Respond to non-verbal communication (Body language)
(35.5)	2.74	Interpret and explain graphic illustrations (graphs, charts, tables)
(35.5)	2.74	Read aloud effectively
(37)	2.61	Proofread and edit written communications
(38)	2.45	Write a general report
(39)	2.37	Lead and participate in a business meeting (Parliamentary procedure)
(40)	2.05	Write a formal, documented report

Table 20

RANK ORDER AND MEAN RESPONSE FOR EACH OF THE FORTY COMPETENCIES AS DETERMINED BY GRADUATES OF THE CLERK TYPIST (31-106) PROGRAM

(1)	4.50	Remember essential information
(2)	4.42	Use the telephone effectively
(3)	4.39	Adjust to a variable work load
(4)	4.37	Work cooperatively with other employees
(5.5)	4.32	Understand oral instructions
(5.5)	4.32	Spell correctly
(7)	4.16	Use Grammar correctly
(8)	4.14	Give attention to details
(9)	4.11	Listen tactfully
(10)	4.00	Use the voice effectively and pronunciation of words correctly
(11)	3.97	Prepare written work neatly
(12)	3.84	Question individuals to clarify information
(13)	3.79	Adapt spoken word usage to the job situation
(14)	3.71	Maintain confidentiality concerning job-related information
(15.5)	3.68	Complete job-related forms (Applications, purchase requisitions, invoices, sales receipts, orders)
(15.5)	3.68	Take notes effectively
(17.5)	3.58	Express ideas clearly and concisely
(17.5)	3.58	Punctuate
(19)	3.63	Proofread and edit written communications
(20)	3.42	Understand occupational terminology
(21)	3.37	Adapt written word usage to the job situation
(22)	3.24	Write a business letter
(23)	3.16	Handle receptions and introductions competently
(24)	3.13	Give instructions orally
(25)	3.03	Use abbreviations and numbers in report writing
(26.5)	2.82	Read to comprehend job-related and technical materials
(26.5)	2.82	Skim for pertinent information
(28)	2.79	Listen for main ideas
(29)	2.74	Recognize fact from opinion
(30)	2.50	Respond to non-verbal communication (Body language)
(31)	2.29	Present technical data orally
(32.5)	2.11	Read aloud effectively
(32.5)	2.11	Interpret and explain graphic illustrations (graphs, charts, tables)
(34)	2.05	Write a general report
(35)	1.92	Write a formal, documented report
(36)	1.87	Participate in a problem-solving or information discussion group
(37.5)	1.76	Participate in a conference
(37.5)	1.76	Organize and lead a conference
(39)	1.74	Lead a problem-solving or informational discussion group
(40)	1.66	Lead and participate in a business meeting (Parliamentary procedure)

Table 21

RANK ORDER AND MEAN RESPONSE FOR EACH OF THE FORTY COMPETENCIES AS DETERMINED BY GRADUATES OF THE STENOGRAPHY (31-106) PROGRAM

(1)	4.74	Work cooperatively with other employees
(2)	4.59	Spell correctly
(3)	4.56	Understand oral instructions
(4.5)	4.44	Adjust to a variable work load
(4.5)	4.44	Remember essential information
(6)	4.38	Listen tactfully
(7.5)	4.37	Maintain confidentiality concerning job-related information
(7.5)	4.37	Use the telephone effectively
(9)	4.22	Give attention to details
(10)	4.12	Prepare written work neatly
(11.5)	4.07	Use Grammar correctly
(11.5)	4.07	Adapt spoken word usage to the job situation
(13)	4.04	Question individuals to clarify information
(14)	4.00	Understand occupational terminology
(15.5)	3.96	Punctuate
(15.5)	3.96	Complete job-related forms (Applications, purchase requisitions, invoices, sales receipts, orders)
(17)	3.93	Take notes effectively
(18)	3.85	Use the voice effectively and pronunciation of words correctly
(19)	3.74	Adapt written word usage to the job situation
(20)	3.70	Handle receptions and introductions competently
(21)	3.54	Express ideas clearly and concisely
(22.5)	3.48	Proofread and edit written communications
(22.5)	3.48	Write a business letter
(24)	3.04	Skim for pertinent information
(25)	3.00	Give instructions orally
(26)	2.92	Listen for main ideas
(27)	2.85	Use abbreviations and numbers in report writing
(28)	2.81	Read to comprehend job-related and technical materials
(29)	2.73	Recognize fact from opinion
(30)	2.59	Respond to non-verbal communication (Body language)
(31)	2.15	Present technical data orally
(32)	2.12	Read aloud effectively
(33)	2.07	Write a general report
(34)	1.93	Interpret and explain graphic illustrations (graphs, charts, tables)
(35)	1.88	Participate in a problem-solving or informational discussion group
(36)	1.85	Participate in a conference
(37)	1.74	Write a formal, documented report
(38)	1.58	Lead and participate in a business meeting (Parliamentary procedure)
(39)	1.31	Organize and lead a conference
(40)	1.27	Lead a problem-solving or informational discussion group

Table 22

RANK ORDER AND MEAN RESPONSE FOR EACH OF THE FORTY COMPETENCIES AS DETERMINED BY GRADUATES OF THE SECRETARIAL SCIENCE (10-106) PROGRAM

(1)	4.67	Spell correctly
(2)	4.55	Adjust to a variable work load
(3)	4.36	Understand oral instructions
(5)	4.33	Give attention to details
(5)	4.33	Remember essential information
(5)	4.33	Use Grammar correctly
(7)	4.30	Work cooperatively with other employees
(8)	4.27	Maintain confidentiality concerning job-related information
(9)	4.18	Prepare written work neatly
(10)	4.16	Listen tactfully
(11.5)	4.15	Express ideas clearly and concisely
(11.5)	4.15	Punctuate
(13)	4.12	Use the telephone effectively
(14.5)	4.00	Adapt written word usage to the job situation
(14.5)	4.00	Proofread and edit written communications
(16.5)	3.88	Use the voice effectively and pronunciation of words correctly
(16.5)	3.88	Understand occupational terminology
(18)	3.79	Take notes effectively
(19.5)	3.73	Adapt spoken word usage to the job situation
(19.5)	3.73	Complete job-related forms (Applications, purchase requisitions, invoices, sales receipts, orders)
(21)	3.55	Question individuals to clarify information
(22)	3.42	Write a business letter
(23)	3.33	Handle receptions and introductions competently
(24)	3.30	Skim for pertinent information
(25)	3.15	Read to comprehend job-related and technical materials
(26.5)	3.12	Use abbreviations and numbers in report writing
(26.5)	3.12	Listen for main ideas
(28)	2.97	Give instructions orally
(29)	2.85	Recognize fact from opinion
(30)	2.61	Present technical data orally
(31)	2.36	Interpret and explain graphic illustrations (graphs, charts, tables)
(32)	2.30	Write a general report
(33)	2.24	Respond to non-verbal communication (Body language)
(34)	2.09	Read aloud effectively
(35)	2.06	Participate in a problem-solving or informational discussion group
(36)	1.97	Participate in a conference
(37)	1.76	Write a formal, documented report
(38)	1.67	Organize and lead a conference
(39.5)	1.58	Lead a problem-solving or informational discussion group
(39.5)	1.58	Lead and participate in a business meeting (Parliamentary procedure)

Table 23

RANK ORDER AND MEAN RESPONSE FOR EACH OF THE FORTY COMPETENCIES AS DETERMINED BY GRADUATES OF THE MECHANICAL DRAFTING (31-421) PROGRAM

(1)	4.50	Understand oral instructions
(2)	4.39	Give attention to details
(3)	4.33	Work cooperatively with other employees
(4)	4.29	Express ideas clearly and concisely
(5)	4.28	Remember essential information
(6)	4.22	Understand occupational terminology
(7)	4.00	Adjust to a variable work load
(8.5)	3.94	Prepare written work neatly
(8.5)	3.94	Question individuals to clarify information
(10)	3.78	Read to comprehend job-related and technical materials
(11.5)	3.67	Give instructions orally
(11.5)	3.67	Listen tactfully
(13)	3.64	Participate in a conference
(14.5)	3.61	Present technical data orally
(14.5)	3.61	Spell correctly
(16)	3.44	Adapt spoken word usage to the job situation
(17.5)	3.33	Complete job-related forms (Applications, purchase requisitions, invoices, sales receipts, orders)
(17.5)	3.33	Interpret and explain graphic illustrations (graphs, charts, tables)
(19)	3.28	Listen for main ideas
(20)	3.22	Use Grammar correctly
(21.5)	3.17	Use the voice effectively and pronunciation of words correctly
(21.5)	3.17	Take notes effectively
(23)	3.12	Maintain confidentiality concerning job-related information
(24)	3.00	Write a formal, documented report
(26)	2.94	Recognize fact from opinion
(26)	2.94	Use the telephone effectively
(26)	2.94	Adapt written word usage to the job situation
(28)	2.89	Use abbreviations and numbers in report writing
(29)	2.78	Proofread and edit written communications
(31)	2.61	Skim for pertinent information
(31)	2.61	Punctuate
(31)	2.61	Handle receptions and introductions competently
(33)	2.50	Participate in a problem-solving or informational discussion group
(34)	2.11	Respond to non-verbal communication (Body language)
(35)	2.00	Lead a problem-solving or informational discussion group
(36.5)	1.89	Write a general report
(36.5)	1.89	Write a business letter
(38)	1.83	Organize and lead a conference
(39)	1.56	Lead and participate in a business meeting (Parliamentary procedure)
(40)	1.50	Read aloud effectively

Table 24

RANK ORDER AND MEAN RESPONSE FOR EACH OF THE FORTY COMPETENCIES AS DETERMINED BY GRADUATES OF THE MACHINE TOOL OPERATION (32-420) PROGRAM

(1)	4.42	Remember essential information
(2.5)	4.26	Understand oral instructions
(2.5)	4.26	Work cooperatively with other employees
(4)	4.16	Understand occupational terminology
(5)	4.05	Listen tactfully
(6)	3.94	Give attention to details
(7)	3.67	Adjust to a variable work load
(8)	3.47	Adapt spoken word usage to the job situation
(9)	3.42	Express ideas clearly and concisely
(10.5)	3.37	Read to comprehend job-related and technical materials
(10.5)	3.37	Give instructions orally
(12)	3.26	Listen for main ideas
(13.5)	3.00	Recognize fact from opinion
(13.5)	3.00	Interpret and explain graphic illustrations (graphs, charts, tables)
(15)	2.89	Present technical data orally
(16.5)	2.84	Question individuals to clarify information
(16.5)	2.84	Use the voice effectively and pronunciation of words correctly
(18.5)	2.74	Adapt written word usage to the job situation
(18.5)	2.74	Use Grammar correctly
(20.5)	2.53	Take notes effectively
(20.5)	2.53	Spell correctly
(22)	2.47	Complete job-related forms (Applications, purchase requisitions, invoices, sales receipts, orders)
(23)	2.44	Maintain confidentiality concerning job-related information
(24)	2.16	Use abbreviations and numbers in report writing
(25)	2.05	Use the telephone effectively
(26)	1.84	Participate in a problem-solving or informational discussion group
(27.5)	1.79	Lead a problem-solving or informational discussion group
(27.5)	1.79	Respond to non-verbal communication (Body language)
(29)	1.78	Participate in a conference
(31)	1.74	Skim for pertinent information
(31)	1.74	Prepare written work neatly
(31)	1.74	Handle receptions and introductions competently
(33)	1.63	Punctuate
(34)	1.58	Organize and lead a conference
(35.5)	1.42	Write a general report
(35.5)	1.42	Read aloud effectively
(37.5)	1.37	Lead and participate in a business meeting (Parliamentary procedure)
(37.5)	1.37	Write a business letter
(39)	1.33	Write a formal, documented report
(40)	1.32	Proofread and edit written communications

Table 25

RANK ORDER AND MEAN RESPONSE FOR EACH OF THE FORTY COMPETENCIES AS DETERMINED BY GRADUATES OF THE MACHINE TOOL OPERATION (31-420) PROGRAM

(1)	4.31	Work cooperatively with other employees
(2)	4.23	Interpret and explain graphic illustrations (graphs, charts, tables)
(3.5)	4.15	Remember essential information
(3.5)	4.15	Understand oral instructions
(5)	3.92	Understand occupational terminology
(6)	3.85	Give attention to details
(7.5)	3.62	Express ideas clearly and concisely
(7.5)	3.62	Listen tactfully
(9)	3.54	Read to comprehend job-related and technical materials
(10)	3.46	Adapt spoken word usage to the job situation
(11)	3.31	Give instructions orally
(12.5)	3.23	Question individuals to clarify information
(12.5)	3.23	Adjust to a variable work load
(14.5)	2.92	Adapt written word usage to the job situation
(14.5)	2.92	Present technical data orally
(16)	2.77	Listen for main ideas
(17.5)	2.62	Use the voice effectively and pronunciation of words correctly
(17.5)	2.62	Recognize fact from opinion
(19)	2.54	Spell correctly
(20.5)	2.46	Complete job-related forms (Applications, purchase requisitions, invoices sales receipts, orders)
(20.5)	2.46	Participate in a problem-solving or informational discussion group
(22)	2.38	Maintain confidentiality concerning job-related information
(23)	2.23	Take notes effectively
(24)	2.08	Use Grammar correctly
(25.5)	2.00	Handle receptions and introductions competently
(25.5)	2.00	Punctuate
(27.5)	1.92	Proofread and edit written communications
(27.5)	1.92	Skim for pertinent information
(30)	1.77	Use the telephone effectively
(30)	1.77	Respond to non-verbal communication (Body language)
(30)	1.77	Prepare written work neatly
(32)	1.69	Lead a problem-solving or informational discussion group
(33.5)	1.62	Use abbreviations and numbers in report writing
(33.5)	1.62	Write a general report
(35)	1.46	Organize and lead a conference
(36.5)	1.31	Write a business letter
(36.5)	1.31	Participate in a conference
(38)	1.23	Read aloud effectively
(39)	1.15	Lead and participate in a business meeting (Parliamentary procedure)
(40)	1.00	Write a formal, documented report

Table 26

RANK ORDER AND MEAN RESPONSE FOR EACH OF THE FORTY COMPETENCIES AS DETERMINED BY GRADUATES OF THE PRACTICAL NURSING (31-510) PROGRAM

(1)	4.86	Maintain confidentiality concerning job-related information
(2)	4.81	Understand occupational terminology
(3)	4.71	Adapt spoken word usage to the job situation
(4)	4.67	Understand oral instructions
(5.5)	4.62	Remember essential information
(5.5)	4.62	Work cooperatively with other employees
(7.5)	4.52	Adapt written word usage to the job situation
(7.5)	4.52	Listen tactfully
(10)	4.38	Respond to non-verbal communication (Body language)
(10)	4.38	Spell correctly
(10)	4.38	Give attention to details
(12)	4.33	Use the voice effectively and pronunciation of words correctly
(13)	4.29	Adjust to a variable work load
(14)	4.24	Give instructions orally
(15.5)	4.19	Express ideas clearly and concisely
(15.5)	4.19	Read to comprehend job-related and technical materials
(17)	4.14	Question individuals to clarify information
(18)	4.10	Recognize fact from opinion
(19)	4.00	Listen for main ideas
(20.5)	3.90	Use the telephone effectively
(20.5)	3.90	Use Grammar correctly
(22)	3.86	Take notes effectively
(23)	3.81	Interpret and explain graphic illustrations (graphs, charts, tables)
(24)	3.79	Participate in a conference
(25)	3.71	Use abbreviations and numbers in report writing
(26)	3.52	Participate in a problem-solving or informational discussion group
(27)	3.48	Complete job-related forms (Applications, purchase requisitions, invoices, sales receipts, orders)
(28)	3.43	Prepare written work neatly
(29)	3.38	Skim for pertinent information
(30)	3.24	Present technical data orally
(31.5)	3.14	Handle receptions and introductions competently
(31.5)	3.14	Punctuate
(33)	2.95	Write a general report
(34)	2.76	Proofread and edit written communications
(35)	2.71	Lead a problem-solving or informational discussion group
(36)	2.70	Write a formal, documented report
(37)	2.48	Organize and lead a conference
(38)	2.24	Read aloud effectively
(39)	2.05	Write a business letter
(40)	2.00	Lead and participate in a business meeting (Parliamentary procedure)

Table 27

RANK ORDER AND MEAN RESPONSE FOR EACH OF THE FORTY COMPETENCIES AS DETERMINED BY GRADUATES OF THE MEDICAL ASSISTANT (31-509) PROGRAM

(1)	4.75	Remember essential information
(2)	4.67	Maintain confidentiality concerning job-related information
(3.5)	4.58	Understand oral instructions
(3.5)	4.58	Work cooperatively with other employees
(5)	4.54	Understand occupational terminology
(6.5)	4.50	Use the voice effectively and pronunciation of words correctly
(6.5)	4.50	Spell correctly
(8)	4.46	Adjust to a variable work load
(9)	4.38	Use the telephone effectively
(10)	4.33	Use Grammar correctly
(11)	4.29	Listen tactfully
(12)	4.25	Give instructions orally
(13)	4.04	Give attention to details
(14)	4.00	Express ideas clearly and concisely
(15.5)	3.92	Adapt spoken word usage to the job situation
(15.5)	3.92	Question individuals to clarify information
(17)	3.88	Handle receptions and introductions competently
(18)	3.79	Prepare written work neatly
(19)	3.54	Take notes effectively
(20)	3.52	Complete job-related forms (Applications, purchase requisitions, invoices, sales receipts, orders)
(21.5)	3.42	Adapt written word usage to the job situation
(21.5)	3.42	Read to comprehend job-related and technical materials
(23)	3.29	Punctuate
(24)	3.21	Present technical data orally
(25)	3.13	Respond to non-verbal communication (Body language)
(26)	3.08	Use abbreviations and numbers in report writing
(27)	2.96	Listen for main ideas
(28)	2.74	Recognize fact from opinion
(29)	2.58	Skim for pertinent information
(30)	2.50	Proofread and edit written communications
(31)	2.43	Interpret and explain graphic illustrations (graphs, charts, tables)
(32)	2.33	Write a business letter
(33)	2.22	Read aloud effectively
(34)	1.91	Participate in a conference
(35)	1.83	Participate in a problem-solving or informational discussion group
(36)	1.70	Write a formal, documented report
(37)	1.65	Lead a problem-solving or informational discussion group
(38)	1.61	Write a general report
(39)	1.52	Organize and lead a conference
(40)	1.43	Lead and participate in a business meeting (Parliamentary procedure)

Table 28

RANK ORDER AND MEAN RESPONSE FOR EACH OF THE FORTY COMPETENCIES AS DETERMINED BY GRADUATES OF THE OPERATING ROOM ASSISTANT (31-512) PROGRAM

(1)	4.84	Maintain confidentiality concerning job-related information
(2)	4.79	Listen tactfully
(3.5)	4.74	Understand oral instructions
(3.5)	4.74	Understand occupational terminology
(5)	4.68	Work cooperatively with other employees
(6)	4.63	Adjust to a variable work load
(7)	4.58	Remember essential information
(8)	4.53	Give attention to details
(9)	4.26	Respond to non-verbal communication (Body language)
(10.5)	4.00	Adapt spoken word usage to the job situation
(10.5)	4.00	Give instructions orally
(12)	3.89	Use the voice effectively and pronunciation of words correctly
(13)	3.79	Use Grammar correctly
(14)	3.74	Express ideas clearly and concisely
(15)	3.53	Spell correctly
(16)	3.28	Read to comprehend job-related and technical materials
(18)	3.21	Adapt written word usage to the job situation
(18)	3.21	Question individuals to clarify information
(18)	3.21	Listen for main ideas
(20)	3.11	Recognize fact from opinion
(21)	2.95	Use the telephone effectively
(22)	2.56	Punctuate
(23.5)	2.47	Complete job-related forms (Applications, purchase requisitions, invoices, sales receipts, orders)
(23.5)	2.47	Present technical data orally
(25)	2.32	Skim for pertinent information
(26.5)	2.21	Handle receptions and introductions competently
(26.5)	2.21	Use abbreviations and numbers in report writing
(28)	2.17	Take notes effectively
(29)	2.11	Participate in a problem-solving or informational discussion group
(30.5)	2.05	Prepare written work neatly
(30.5)	2.05	Participate in a conference
(32.5)	1.84	Organize and lead a conference
(32.5)	1.84	Read aloud effectively
(34)	1.58	Lead a problem-solving or informational discussion group
(35.5)	1.53	Interpret and explain graphic illustrations (graphs, charts, tables)
(35.5)	1.53	Write a general report
(37.5)	1.47	Proofread and edit written communications
(37.5)	1.47	Write a formal, documented report
(39.5)	1.37	Write a business letter
(39.5)	1.37	Lead and participate in a business meeting (Parliamentary procedure)

Table 29

RANK ORDER AND MEAN RESPONSE FOR EACH OF THE FORTY COMPETENCIES AS DETERMINED BY GRADUATES OF THE ELECTRONICS (10-605) PROGRAM

(1)	4.57	Understand occupational terminology
(2)	4.51	Remember essential information
(3)	4.34	Read to comprehend job-related and technical materials
(4)	4.29	Work cooperatively with other employees
(5)	4.20	Understand oral instructions
(6)	4.18	Express ideas clearly and concisely
(7)	4.11	Give attention to details
(8)	4.09	Adjust to a variable work load
(9)	3.97	Adapt spoken word usage to the job situation
(10)	3.80	Present technical data orally
(11)	3.74	Give instructions orally
(13)	3.71	Interpret and explain graphic illustrations (graphs, charts, tables)
(13)	3.71	Question individuals to clarify information
(13)	3.71	Listen tactfully
(15.5)	3.66	Use the voice effectively and pronunciation of words correctly
(15.5)	3.66	Complete job-related forms (Applications, purchase requisitions, invoices, sales receipts, orders)
(17)	3.60	Listen for main ideas
(18)	3.49	Adapt written word usage to the job situation
(19)	3.40	Skim for pertinent information
(20)	3.34	Participate in a problem-solving or informational discussion group
(21)	3.32	Spell correctly
(22)	3.31	Use Grammar correctly
(23)	3.29	Take notes effectively
(24.5)	3.20	Maintain confidentiality concerning job-related information
(24.5)	3.20	Recognize fact from opinion
(26.5)	3.14	Use the telephone effectively
(26.5)	3.14	Prepare written work neatly
(28)	2.91	Handle receptions and introductions competently
(29)	2.82	Lead a problem-solving or informational discussion group
(30)	2.74	Use abbreviations and numbers in report writing
(31)	2.71	Participate in a conference
(32)	2.69	Punctuate
(33)	2.60	Write a general report
(34)	2.35	Write a formal, documented report
(35)	2.29	Write a business letter
(36)	2.21	Proofread and edit written communications
(37)	2.12	Organize and lead a conference
(38)	2.11	Respond to non-verbal communication (Body language)
(39)	2.03	Read aloud effectively
(40)	1.82	Lead and participate in a business meeting (Parliamentary procedure)

Table 30

RANK ORDER AND MEAN RESPONSE FOR EACH OF THE FORTY COMPETENCIES AS DETERMINED BY GRADUATES OF THE MECHANICAL DESIGN (10-606) PROGRAM

(1)	4.46	Work cooperatively with other employees
(2)	4.43	Understand oral instructions
(3.5)	4.29	Remember essential information
(3.5)	4.29	Understand occupational terminology
(5.5)	4.25	Express ideas clearly and concisely
(5.5)	4.25	Give attention to details
(7.5)	4.00	Listen for main ideas
(7.5)	4.00	Adjust to a variable work load
(9)	3.93	Question individuals to clarify information
(10)	3.89	Interpret and explain graphic illustrations (graphs, charts, tables)
(11.5)	3.86	Adapt spoken word usage to the job situation
(11.5)	3.86	Listen tactfully
(13.5)	3.79	Spell correctly
(13.5)	3.79	Read to comprehend job-related and technical materials
(15)	3.64	Present technical data orally
(16.5)	3.57	Give instructions orally
(16.5)	3.57	Recognize fact from opinion
(18)	3.50	Complete job-related forms (Applications, purchase requisitions, invoices, sales receipts, orders)
(19.5)	3.36	Participate in a problem-solving or informational discussion group
(19.5)	3.36	Prepare written work neatly
(21)	3.32	Use Grammar correctly
(22)	3.26	Maintain confidentiality concerning job-related information
(23)	3.21	Use the voice effectively and pronunciation of words correctly
(24.5)	3.11	Adapt written word usage to the job situation
(24.5)	3.11	Use the telephone effectively
(26)	3.07	Take notes effectively
(27)	3.00	Skim for pertinent information
(28)	2.96	Participate in a conference
(29)	2.68	Lead a problem-solving or informational discussion group
(30)	2.57	Handle receptions and introductions competently
(31.5)	2.54	Use abbreviations and numbers in report writing
(31.5)	2.54	Write a general report
(33)	2.46	Punctuate
(34)	2.36	Organize and lead a conference
(35)	2.26	Proofread and edit written communications
(36)	2.25	Write a business letter
(37)	2.21	Write a formal, documented report
(38)	2.07	Respond to non-verbal communication (Body language)
(39)	1.93	Lead and participate in a business meeting (Parliamentary procedure)
(40)	1.82	Read aloud effectively

Tables 31 through 35, pp. 57 to 61, present in rank order the mean response for each of the five clusters as determined by supervisors (employers).

Tables 36 through 40, pp. 63 to 67, present in rank order the mean response for each of the five clusters as determined by VTAE graduates.

TABLES 31 THROUGH 35 ON THE FOLLOWING PAGES PRESENT THE RANK ORDER AND MEAN RESPONSE FOR EACH OF THE FORTY COMPETENCIES S DETERMINED BY SUPERVISORS WITHIN EACH OF THE FOLLOWING FIVE CLUSTER AREAS:

Table 31	Office and Distribution Cluster	p. 57
Table 32	Secretarial Cluster	p. 58
Table 33	Industrial Machine Cluster	p. 59
Table 34	Health Cluster	p. 60
Table 35	Industrial Technology Cluster	p. 61

Table 31

RANK ORDER AND MEAN RESPONSE FOR EACH OF THE FORTY COMPETENCIES AS DETERMINED BY SUPERVISORS WITHIN THE OFFICE AND DISTRIBUTION CLUSTER

(Accounting, Data Processing and Marketing)

(1.5)*	4.41**	Remember essential information
(1.5)	4.41	Work cooperatively with other employees
(3)	4.40	Give attention to details
(4)	4.36	Maintain confidentiality concerning job-related information
(5.5)	4.23	Understand oral instructions
(5.5)	4.23	Express ideas clearly and concisely
(7)	4.13	Adjust to a variable work load
(8)	4.10	Listen tactfully
(9)	4.00	Adapt spoken word usage to the job situation
(10)	3.96	Question individuals to clarify information
(11)	3.95	Recognize fact from opinion
(12)	3.94	Adapt written word usage to the job situation
(13)	3.91	Listen for main ideas
(14)	3.88	Understand occupational terminology
(15)	3.84	Read to comprehend job-related and technical materials
(16)	3.82	Give instructions orally
(17)	3.80	Use the telephone effectively
(18)	3.76	Complete job-related forms (Applications, purchase requisitions, invoices, sales receipts, orders)
(19)	3.75	Take notes effectively
(20)	3.66	Prepare written work neatly
(21)	3.57	Use Grammar correctly
(22)	3.56	Spell correctly
(23)	3.52	Use the voice effectively and pronunciation of words correctly
(24)	3.50	Handle receptions and introductions competently
(25.5)	3.44	Present technical data orally
(25.5)	3.44	Skim for pertinent information
(27)	3.43	Write a business letter
(28)	3.42	Participate in a problem-solving or information discussion group
(29)	3.37	Proofread and edit written communications
(30)	3.29	Write a general report
(31)	3.25	Punctuate
(32)	3.24	Interpret and explain graphic illustrations (graphs, charts, tables)
(33)	3.21	Participate in a conference
(34.5)	3.10	Lead a problem-solving or informational discussion group
(34.5)	3.10	Write a formal, documented report
(36)	3.09	Organize and lead a conference
(37)	2.79	Use abbreviations and numbers in report writing
(38)	2.65	Lead and participate in a business meeting (Parliamentary procedure)
(39)	2.54	Respond to non-verbal communication (Body language)
(40)	2.32	Read aloud effectively

*Rank Order of Program Cluster Means

**Program Cluster Means are Means of the Program Means

Table 32

RANK ORDER AND MEAN RESPONSE FOR EACH OF THE FORTY COMPETENCIES AS DETERMINED BY SUPERVISORS WITHIN THE SECRETARIAL CLUSTER

(Clerk Typist, Stenographer and Secretarial Science)

(1)	4.66	Maintain confidentiality concerning job-related information
(2)	4.59	Work cooperatively with other employees
(3)	4.45	Understand oral instructions
(4.5)	4.44	Remember essential information
(4.5)	4.44	Spell correctly
(6)	4.41	Give attention to details
(7)	4.38	Adjust to a variable work load
(8)	4.27	Use the telephone effectively
(9.5)	4.16	Use Grammar correctly
(9.5)	4.16	Listen tactfully
(11)	4.11	Prepare written work neatly
(12)	4.06	Punctuate
(13)	3.97	Adapt spoken word usage to the job situation
(14)	3.92	Proofread and edit written communications
(15)	3.91	Take notes effectively
(16)	3.87	Adapt written word usage to the job situation
(17)	3.83	Express ideas clearly and concisely
(18)	3.82	Complete job-related forms (Applications, purchase requisitions, invoices, sales receipts, orders)
(19)	3.81	Understand occupational terminology
(20)	3.79	Use the voice effectively and pronunciation of words correctly
(21)	3.71	Write a business letter
(22)	3.65	Handle receptions and introductions competently
(23)	3.64	Question individuals to clarify information
(24)	3.52	Listen for main ideas
(25)	3.41	Give instructions orally
(26)	3.31	Recognize fact from opinion
(27)	3.23	Skim for pertinent information
(28)	3.12	Read to comprehend job-related and technical materials
(29)	2.66	Use abbreviations and numbers in report writing
(30)	2.59	Respond to non-verbal communication (Body language)
(31)	2.50	Write a general report
(32.5)	2.33	Present technical data orally
(32.5)	2.33	Participate in a problem-solving or informational discussion group
(34)	2.24	Interpret and explain graphic illustrations (graphs, charts, tables)
(35)	2.23	Participate in a conference
(36)	2.10	Write a formal, documented report
(37)	2.09	Organize and lead a conference
(38)	1.98	Read aloud effectively
(39)	1.93	Lead a problem-solving or information discussion group
(40)	1.79	Lead and participate in a business meeting (Parliamentary procedure)

Table 33

RANK ORDER AND MEAN RESPONSE FOR EACH OF THE FORTY COMPETENCIES AS DETERMINED BY SUPERVISORS WITHIN THE INDUSTRIAL MACHINE CLUSTER

(Mechanical Design and Machine Tool Operation)

(1)	4.46	Work cooperatively with other employees
(2)	4.27	Give attention to details
(3)	4.23	Remember essential information
(4)	4.20	Understand oral instructions
(5)	4.04	Adjust to a variable work load
(6)	3.96	Express ideas clearly and concisely
(7)	3.92	Understand occupational terminology
(8)	3.91	Listen tactfully
(9)	3.85	Adapt spoken word usage to the job situation
(10)	3.83	Recognize fact from opinion
(11)	3.77	Listen for main ideas
(12)	3.59	Question individuals to clarify information
(13.5)	3.57	Give instructions orally
(13.5)	3.57	Read to comprehend job-related and technical materials
(15)	3.55	Adapt written word usage to the job situation
(16)	3.52	Take notes effectively
(17.5)	3.41	Maintain confidentiality concerning job-related information
(17.5)	3.41	Interpret and explain graphic illustrations (graphs, charts, tables)
(19)	3.24	Complete job-related forms (Applications, purchase requisitions, invoices, sales receipts, orders)
(20)	3.11	Spell correctly
(21)	3.07	Present technical data orally
(22)	3.05	Prepare written work neatly
(23)	2.99	Use the telephone effectively
(24)	2.93	Skim for pertinent information
(25)	2.83	Use Grammar correctly
(26)	2.77	Use the voice effectively and pronunciation of words correctly
(27)	2.63	Participate in a problem-solving or informational discussion group
(28)	2.59	Handle receptions and introductions competently
(29)	2.57	Participate in a conference
(30)	2.50	Use abbreviations and numbers in report writing
(31)	2.49	Proofread and edit written communications
(32)	2.47	Write a general report
(33.5)	2.38	Write a business letter
(33.5)	2.38	Punctuate
(35)	2.27	Lead a problem-solving or informational discussion group
(36)	2.24	Organize and lead a conference
(37)	2.20	Write a formal, documented report
(38)	1.89	Lead and participate in a business meeting (Parliamentary procedure)
(39)	1.85	Read aloud effectively
(40)	1.83	Respond to non-verbal communication (Body language)

Table 34

RANK ORDER AND MEAN RESPONSE FOR EACH OF THE FORTY COMPETENCIES AS DETERMINED BY SUPERVISORS WITHIN THE HEALTH CLUSTER

(Practical Nursing, Medical Assistant and Operating Room Assistant)

(1)	4.82	Maintain confidentiality concerning job-related information
(2)	4.73	Work cooperatively with other employees
(3)	4.58	Understand oral instructions
(4)	4.57	Adjust to a variable work load
(5)	4.56	Remember essential information
(6)	4.43	Listen tactfully
(7)	4.40	Give attention to details
(8)	4.37	Understand occupational terminology
(9)	4.27	Adapt spoken word usage to the job situation
(10)	4.20	Use the telephone effectively
(11)	4.12	Spell correctly
(12)	4.02	Give instructions orally
(13)	3.99	Express ideas clearly and concisely
(14)	3.94	Use the voice effectively and pronunciation of words correctly
(15)	3.90	Question individuals to clarify information
(16)	3.87	Adapt written word usage to the job situation
(17)	3.80	Use Grammar correctly
(18)	3.77	Respond to non-verbal communication (Body language)
(19)	3.66	Recognize fact from opinion
(20)	3.62	Take notes effectively
(21)	3.61	Listen for main ideas
(22)	3.59	Read to comprehend job-related and technical materials
(23)	3.49	Prepare written work neatly
(24)	3.27	Handle receptions and introductions competently
(25.5)	3.17	Complete job-related forms (Applications, purchase requisitions, invoices, sales receipts, orders)
(25.5)	3.17	Skim for pertinent information
(27)	3.02	Participate in a problem-solving or informational discussion group
(28)	2.98	Present technical data orally
(29)	2.96	Participate in a conference
(30)	2.94	Punctuate
(31)	2.88	Use abbreviations and numbers in report writing
(32)	2.38	Organize and lead a conference
(33)	2.32	Interpret and explain graphic illustrations (graphs, chairs, tables)
(34)	2.24	Lead a problem-solving or informational discussion group
(35)	2.21	Write a general report
(36)	2.13	Proofread and edit written communications
(37)	2.06	Write a formal, documented report
(38)	1.99	Read aloud effectively
(39)	1.98	Write a business letter
(40)	1.87	Lead and participate in a business meeting (Parliamentary procedure)

Table 35

RANK ORDER AND MEAN RESPONSE FOR EACH OF THE FORTY COMPETENCIES AS DETERMINED BY SUPERVISORS WITHIN THE INDUSTRIAL TECHNOLOGY CLUSTER

(Electronics and Mechanical Design)

(1)	4.48	Work cooperatively with other employees
(2)	4.25	Understand oral instructions
(3)	4.23	Remember essential information
(4)	4.13	Give attention to details
(5)	4.05	Understand occupational terminology
(6)	4.02	Read to comprehend job-related and technical materials
(7)	3.98	Express ideas clearly and concisely
(8)	3.96	Adjust to a variable work load
(9)	3.89	Adapt spoken word usage to the job situation
(10)	3.84	Adapt written word usage to the job situation
(11)	3.82	Maintain confidentiality concerning job-related information
(12)	3.80	Question individuals to clarify information
(13)	3.79	Give instructions orally
(14.5)	3.76	Recognize fact from opinion
(14.5)	3.76	Listen tactfully
(16)	3.69	Listen for main ideas
(17)	3.68	Interpret and explain graphic illustrations (graphs, charts, tables)
(18)	3.49	Take notes effectively
(19)	3.45	Present technical data orally
(20)	3.39	Prepare written work neatly
(21)	3.36	Use the telephone effectively
(22)	3.25	Complete job-related forms (Applications, purchase requisitions, invoices, sales receipts, orders)
(23)	3.20	Skim for pertinent information
(24)	3.18	Use Grammar correctly
(25.5)	3.09	Spell correctly
(25.5)	3.09	Participate in a problem-solving or informational discussion group
(27)	3.04	Write a general report
(28.5)	3.02	Use the voice effectively and pronunciation of words correctly
(28.5)	3.02	Write a business letter
(30)	2.91	Write a formal, documented report
(31)	2.89	Participate in a conference
(32.5)	2.88	Proofread and edit written communications
(32.5)	2.88	Organize and lead a conference
(34)	2.78	Lead a problem-solving or informational discussion group
(35)	2.67	Handle receptions and introductions competently
(36)	2.58	Punctuate
(37)	2.35	Use abbreviations and numbers in report writing
(38)	2.33	Lead and participate in a business meeting (Parliamentary procedure)
(39)	2.20	Respond to non-verbal communication (Body language)
(40)	2.04	Read aloud effectively

TABLES 36 THROUGH 40 ON THE FOLLOWING PAGES PRESENT THE RANK ORDER AND MEAN RESPONSE FOR EACH OF THE FORTY COMPETENCIES AS DETERMINED BY GRADUATES IN THE FOLLOWING FIVE CLUSTER AREAS:

Table 36	Office and Distribution Cluster	p. 63
Table 37	Secretarial Cluster	p. 64
Table 38	Industrial Machine Cluster	p. 65
Table 39	Health Cluster	p. 66
Table 40	Industrial Technology Cluster	p. 67

Table 36

RANK ORDER AND MEAN RESPONSE FOR EACH OF THE FORTY COMPETENCIES AS DETERMINED BY GRADUATES WITHIN THE OFFICE AND DISTRIBUTION CLUSTER

(Accounting, Data Processing and Marketing)

(1)*	4.51**	Remember essential information
(2)	4.47	Work cooperatively with other employees
(3)	4.35	Understand oral instructions
(4)	4.32	Understand occupational terminology
(5)	4.28	Adjust to a variable work load
(6)	4.26	Give attention to details
(7)	4.20	Express ideas clearly and concisely
(8)	4.19	Maintain confidentiality concerning job-related information
(9)	4.13	Adapt spoken word usage to the job situation
(10)	4.04	Listen tactfully
(11)	3.95	Question individuals to clarify information
(12)	3.82	Complete job-related forms (Applications, purchase requisitions, invoices, sales receipts, orders)
(13.5)	3.74	Use the telephone effectively
(13.5)	3.74	Give instructions orally
(15.5)	3.69	Use the voice effectively and pronunciation of words correctly
(15.5)	3.69	Read to comprehend job-related and technical materials
(17)	3.61	Listen for main ideas
(18)	3.57	Use Grammar correctly
(19)	3.56	Spell correctly
(20)	3.45	Adapt written word usage to the job situation
(21.5)	3.41	Present technical data orally
(21.5)	3.41	Prepare written work neatly
(23.5)	3.36	Take notes effectively
(23.5)	3.36	Recognize fact from opinion
(25)	3.22	Skim for pertinent information
(26)	3.14	Handle receptions and introductions competently
(27)	3.11	Use abbreviations and numbers in report writing
(28)	2.93	Interpret and explain graphic illustrations (graphs, charts, tables)
(29)	2.89	Participate in a problem-solving or informational discussion group
(30)	2.81	Participate in a conference
(31)	2.76	Punctuate
(32)	2.68	Write a general report
(33)	2.67	Write a business letter
(34)	2.62	Proofread and edit written communications
(35)	2.61	Organize and lead a conference
(36)	2.58	Lead a problem-solving or informational discussion group
(37)	2.50	Respond to non-verbal communication (Body language)
(38)	2.36	Write a formal, documented report
(39)	2.27	Read aloud effectively
(40)	2.12	Lead and participate in a business meeting (Parliamentary procedure)

*Rank Order of Program Cluster means

**Program Cluster Means are Means of the Program Means

Table 37

RANK ORDER AND MEAN RESPONSE FOR EACH OF THE FORTY COMPETENCIES AS DETERMINED BY GRADUATES WITHIN THE SECRETARIAL CLUSTER

(Clerk Typist, Stenographer and Secretarial Science)

(1)	4.53	Spell correctly
(2)	4.47	Work cooperatively with other employees
(3)	4.46	Adjust to a variable work load
(4)	4.42	Remember essential information
(5)	4.41	Understand oral instructions
(6)	4.30	Use the telephone effectively
(7)	4.23	Give attention to details
(8)	4.22	Listen tactfully
(9)	4.19	Use Grammar correctly
(10)	4.12	Maintain confidentiality concerning job-related information
(11)	4.09	Prepare written work neatly
(12)	3.91	Use the voice effectively and pronunciation of words correctly
(13)	3.90	Punctuate
(14)	3.86	Adapt spoken word usage to the job situation
(15)	3.81	Question individuals to clarify information
(16)	3.80	Take notes effectively
(17)	3.79	Complete job-related forms (Applications, purchase requisitions, invoices, sales receipts, orders)
(18)	3.77	Understand occupational terminology
(19)	3.76	Express ideas clearly and concisely
(20.5)	3.70	Adapt written word usage to the job situation
(20.5)	3.70	Proofread and edit written communications
(22)	3.40	Handle receptions and introductions competently
(23)	3.38	Write a business letter
(24)	3.05	Skim for pertinent information
(25)	3.03	Give instructions orally
(26)	3.00	Use abbreviations and numbers in report writing
(27)	2.94	Listen for main ideas
(28)	2.93	Read to comprehend job-related and technical materials
(29)	2.77	Recognize fact from opinion
(30)	2.44	Respond to non-verbal communication (Body language)
(31)	2.35	Present technical data orally
(32)	2.14	Write a general report
(33)	2.13	Interpret and explain graphic illustrations (graphs, charts, tables)
(34)	2.11	Read aloud effectively
(35)	1.94	Participate in a problem-solving or informational discussion group
(36)	1.86	Participate in a conference
(37)	1.81	Write a formal, documented report
(38)	1.61	Lead and participate in a business meeting (Parliamentary procedure)
(39)	1.58	Organize and lead a conference
(40)	1.53	Lead a problem-solving or informational discussion group

Table 38

RANK ORDER AND MEAN RESPONSE FOR EACH OF THE FORTY COMPETENCIES AS DETERMINED BY GRADUATES WITHIN THE INDUSTRIAL MACHINE CLUSTER

(Mechanical Drafting, Machine Tool Operation II and Machine Tool Operation I)

(1.5)	4.30	Understand oral instructions
(1.5)	4.30	Work cooperatively with other employees
(3)	4.28	Remember essential information
(4)	4.10	Understand occupational terminology
(5)	4.06	Give attention to details
(6.5)	3.78	Express ideas clearly and concisely
(6.5)	3.78	Listen tactfully
(8)	3.63	Adjust to a variable work load
(9)	3.56	Read to comprehend job-related and technical materials
(10)	3.52	Interpret and explain graphic illustrations (graphs, charts, tables)
(11)	3.46	Adapt spoken word usage to the job situation
(12)	3.45	Give instructions orally
(13)	3.34	Question individuals to clarify information
(14)	3.14	Present technical data orally
(15)	3.10	Listen for main ideas
(16)	2.89	Spell correctly
(17)	2.88	Use the voice effectively and pronunciation of words correctly
(18)	2.87	Adapt written word usage to the job situation
(19)	2.85	Recognize fact from opinion
(20)	2.75	Complete job-related forms (Applications, purchase requisitions, invoices, sales receipts, orders)
(21)	2.68	Use Grammar correctly
(22)	2.65	Maintain confidentiality concerning job-related information
(23)	2.64	Take notes effectively
(24)	2.48	Prepare written work neatly
(25)	2.27	Participate in a problem-solving or informational discussion group
(26)	2.25	Use the telephone effectively
(27)	2.24	Participate in a conference
(28)	2.22	Use abbreviations and numbers in report writing
(29)	2.15	Handle receptions and introductions competently
(30)	2.09	Skim for pertinent information
(31)	2.08	Punctuate
(32)	2.01	Proofread and edit written communications
(33)	1.89	Respond to non-verbal communication (Body language)
(34)	1.83	Lead a problem-solving or informational discussion group
(35)	1.78	Write a formal, documented report
(36)	1.64	Write a general report
(37)	1.62	Organize and lead a conference
(38)	1.52	Write a business letter
(39)	1.38	Read aloud effectively
(40)	1.33	Lead and participate in a business meeting (Parliamentary procedure)

Table 39

RANK ORDER AND MEAN RESPONSE FOR EACH OF THE FORTY COMPETENCIES AS DETERMINED BY GRADUATES WITHIN THE HEALTH CLUSTER

(Practical Nursing, Medical Assistant and Operating Room Assistant)

(1)	4.79	Maintain confidentiality concerning job-related information
(2)	4.70	Understand occupational terminology
(3)	4.66	Understand oral instructions
(4)	4.65	Remember essential information
(5)	4.63	Work cooperatively with other employees
(6)	4.53	Listen tactfully
(7)	4.46	Adjust to a variable work load
(8)	4.32	Give attention to details
(9)	4.24	Use the voice effectively and pronunciation of words correctly
(10)	4.21	Adapt spoken word usage to the job situation
(11)	4.16	Give instructions orally
(12)	4.14	Spell correctly
(13)	4.01	Use Grammar correctly
(14)	3.98	Express ideas clearly and concisely
(15)	3.92	Respond to non-verbal communication (Body language)
(16)	3.76	Question individuals to clarify information
(17)	3.74	Use the telephone effectively
(18)	3.72	Adapt written word usage to the job situation
(19)	3.63	Read to comprehend job-related and technical materials
(20)	3.39	Listen for main ideas
(21)	3.32	Recognize fact from opinion
(22)	3.19	Take notes effectively
(23)	3.16	Complete job-related forms (Applications, purchase requisitions, invoices, sales receipts, orders)
(24)	3.09	Prepare written work neatly
(25)	3.08	Handle receptions and introductions competently
(26.5)	3.00	Use abbreviations and numbers in report writing
(26.5)	3.00	Punctuate
(28)	2.97	Present technical data orally
(29)	2.76	Skim for pertinent information
(30)	2.59	Interpret and explain graphic illustrations (graphs, charts, tables)
(31)	2.58	Participate in a conference
(32)	2.49	Participate in a problem-solving or informational discussion group
(33)	2.24	Proofread and edit written communications
(34)	2.10	Read aloud effectively
(35)	2.03	Write a general report
(36)	1.98	Lead a problem-solving or informational discussion group
(37)	1.96	Write a formal, documented report
(38)	1.95	Organize and lead a conference
(39)	1.92	Write a business letter
(40)	1.60	Lead and participate in a business meeting (Parliamentary procedure)

Table 40

RANK ORDER AND MEAN RESPONSE FOR EACH OF THE FORTY COMPETENCIES AS DETERMINED BY GRADUATES WITHIN THE INDUSTRIAL TECHNOLOGY CLUSTER

(Electronics and Mechanical Design)

(1)	4.43	Understand occupational terminology
(2)	4.40	Remember essential information
(3)	4.38	Work cooperatively with other employees
(4)	4.32	Understand oral instructions
(5)	4.22	Express ideas clearly and concisely
(6)	4.18	Give attention to details
(7)	4.07	Read to comprehend job-related and technical materials
(8)	4.05	Adjust to a variable work load
(9)	3.92	Adapt spoken word usage to the job situation
(10)	3.82	Question individuals to clarify information
(11.5)	3.80	Interpret and explain graphic illustrations (graphs, charts, tables)
(11.5)	3.80	Listen for main ideas
(13)	3.79	Listen tactfully
(14)	3.72	Present technical data orally
(15)	3.66	Give instructions orally
(16)	3.58	Complete job-related forms (Applications, purchase requisitions, invoices, sales receipts, orders)
(17)	3.56	Spell correctly
(18)	3.44	Use the voice effectively and pronunciation of words correctly
(19)	3.39	Recognize fact from opinion
(20)	3.35	Participate in a problem-solving or informational discussion group
(21)	3.32	Use Grammar correctly
(22)	3.30	Adapt written word usage to the job situation
(23)	3.25	Prepare written work neatly
(24)	3.23	Maintain confidentiality concerning job-related information
(25)	3.20	Skim for pertinent information
(26)	3.18	Take notes effectively
(27)	3.13	Use the telephone effectively
(28)	2.84	Participate in a conference
(29)	2.75	Lead a problem-solving or informational discussion group
(30)	2.74	Handle receptions and introductions competently
(31)	2.64	Use abbreviations and numbers in report writing
(32)	2.58	Punctuate
(33)	2.57	Write a general report
(34)	2.28	Write a formal, documented report
(35)	2.27	Write a business letter
(36.5)	2.24	Proofread and edit written communications
(36.5)	2.24	Organize and lead a conference
(38)	2.09	Respond to non-verbal communication (Body language)
(39)	1.93	Read aloud effectively
(40)	1.88	Lead and participate in a business meeting (Parliamentary procedure)

RESULTS OF INTERVIEWS

Business and industry welcomes and wants help from the Wisconsin VTAE Institutes. The warm reception received around the state with the interview-questionnaire approach gave evidence to that. The public relations aspect was very positive as those interviewed made such statements as, "We need more of this." or, "You are someone I really want to talk with." This type of response was prevalent throughout the state.

The desire to cooperate with the vocational-technical institutes is impressive. More personal interviewing should be done with the world of work both for the realistic input that industry can offer and for public relations. Though there sometimes might have been a hesitancy on the part of those interviewed to relinquish time from a busy schedule, this was rarely felt by the researchers, and the intense interest in the interview usually resulted in an extension of time.

The questionnaire used was the same as the one which was mailed with the exception of a frequency count for 13 of the competencies. Those interviewed were asked to approximate the average number of times per week that they felt each competency was performed. This data is compiled by cluster. The technology cluster was eliminated because of too few interviews (see Table 41, p. 74).

The Classfied Directory of Wisconsin Manufacturers was used to determine the businesses and industries to be contacted in each city. Supervisors were interviewed from each of the programs in this study. There were 66 visits with no appointments being made. This technique worked extremely well. In two instances, supervisory meetings were being held and an interview was impossible. Generally, waiting was minimal and response was excellent. Sometimes the person interviewed did not feel that the questionnaire was broad enough to be adaptable for the position they supervised. They were encouraged to attempt to adapt it; but if they felt this was impossible, an entirely verbal interview was held.

In presenting the questionnaire, asking for ten minutes of their time was another effective technique for often they would have preferred to fill in the questionnaire at a more convenient time. In explaining that many questionnaires had been mailed and that valuable suggestions were often received as they commented to the researcher on a particular skill, the time was allowed and often extended. At several interviews the telephone was used to receive input from a supervisor who was unable to leave his location. Upon completion of the interview, the researchers asked if there was a supervisor of employees in another area of this study who might be available to complete a questionnaire.

In an attempt to contact supervisory people, the purpose of the visit was explained to receptionists and gatekeepers. In large companies it was often necessary to work through personnel people who proved to be extremely accommodating. The researcher again explained the purpose of the visit to the personnel people stating that it would take about ten minutes to fill out the questionnaire, and that supervisory people might offer valuable help because of their direct contact with the VTAE graduate-employees.

It was not always possible to see supervisory people and even when it was, many persons from personnel offices chose to fill out the questionnaire in a familiar supervisory capacity, usually that of the Secretarial Cluster, They offered many excellent comments on job application procedures. Their descriptions of job applicants could not be categorized entirely as graduates of the vocational-technical schools, but they felt that job application procedures should receive more emphasis in communication skills classes.

Often discussed was the sloppily completed application form. One individual stated, "I have a feeling if you could teach them to fill out an application neatly . . . I know we should be able to see beyond that, but we are human and we don't." A personnel

manager who interviews many of our marketing graduates stated, "They are lacking in job application procedures. Personality and poise must be evident when they are applying for a job. They must be responsive and aggressive." The personnel manager from a large company that hired graduates from the Industrial Technology Cluster commented on the nonverbal communication of many of the applicants he sees: "When they come through that door, fall down in that chair and nonverbally communicate--what can you do for me today--meanwhile staring out the window, talking with a cigarette in their mouth . . . just a lot of little things that lead to a bad impression, I know we do not want them to represent our company." These comments were, however, balanced by the following: "We go to the vocational schools when we want to hire." and "We have had great success with vocational-technical graduates. They are often better than those with work experience and no vocational-technical training."

Many times after discussions that included the foregoing comments, the personnel people accompanied the researcher to a supervisor, or a supervisor was called to the personnel office. The give-and-take of the three-way interview was extremely informative as statements made by the personnel person were restated and evaluated.

One such statement was that 50 percent of the mistakes in this particular factory were due to a lack of listening. In this instance, supervisory people were unavailable and the three-way discussion included the Vice-President in Charge of Manufacturing. When the 50 percent figure was reiterated, it was determined to be conservative and the importance of listening in communication was discussed.

Listening was felt by many of the interviewees to be of paramount importance in communication skills competencies. To improve listening, it was suggested that the VTAE institutes include student learning opportunities in notetaking, paraphrasing, and questioning to clarify information. It would seem that feedback

in the classroom must be requested at every opportunity to help students with these skills. Somehow when the new employee enters the world-of-work, he must know the value of paraphrasing.

This was emphasized in most areas of this study and was often discussed in connection with the telephone, which is another area which needs more emphasis. A supervisor in the mechanical design area stated, "If there were a square beyond extremely important, I would mark it." A personnel coordinator from a large mercantile business mentioned that buyers' plans for displays in branch stores were often explained over the telephone, and when results of the conversation were observed, the buyer was amazed.

A personnel director stated that if he could know the Who/When/Why/Where of each telephone call or visit received when he was out of the office, it would save him a great deal of time. He mentioned the finesse that is required in asking questions of callers when a boss is unavailable. He felt this should be a part of role-playing situations in communication skills courses, emphasizing paraphrasing and note-taking to assure accurate translations. In this connection the use of tact must be taught, as the misnomer "common sense" is too often missing in graduate-employees.

Another personnel director had his secretary do reference checks on the telephone by calling past employers. Perhaps this could be used as another role-playing situation. The competency "Use the telephone effectively" elicited a great deal of input from those interviewed. A machine tool foreman said the use of the telephone is very important despite the possibility that his people might use it only once a week. "If the job is going to be run correctly, you must make yourself understood and understand the other person."

The number of times a competency is performed does not necessarily determine the importance of that particular competency. Although the frequency of "Use the telephone

effectively" was 48.7 times per week in the Office and Distribution Cluster and only 6.7 in the Industrial Machine Cluster, it was emphasized as being extremely important to both job clusters and therefore necessary in all communication skills classes.

The researchers felt this was also true with the competency, "Participate in a problem-solving or informational discussion group." Many companies build in time for weekly, twice monthly, or monthly problem-solving discussions. Though the frequency count may be small, it is at these problem-solving discussions that the employee's ability to express himself clearly and concisely will make or break his career. Those who can express themselves are going to be the ones who progress in their company. As one assistant personnel director put it, "You hit a point where they are passed over regardless of their technical ability. A man has to stand up in front of a group and respond to reports intelligently . . . that is why many companies are demanding college degrees." Clearly, our graduates must be prepared to communicate their ideas, and if these ideas are not accepted, they must not look at this as criticism. "Some people are stifled because one idea is turned down," stated a drafting supervisor.

The inability to accept criticism or interpretation of suggestions as criticisms was often mentioned. This competency must be considered together with other aspects of human relations. Sometimes questioned was the career guidance of graduate-employees who do not seem to enjoy working with people, yet are in people-oriented jobs such as marketing and practical nursing. The above examples help to explain employers' ranking of "Work cooperatively with other employees" as number one in responses on the interview-questionnaire. Therefore, it is important that communication classes not neglect the aspect of personal development.

Finally, the researchers found from interviews with supervisors that teachers must do more with nonverbal communication, listening, paraphrasing, questioning to clarify information, use of the telephone, and the clear and concise expression of ideas. Only with these skills will our graduates be able to compete and progress in the world of work.

Table 41 on page 74 presents the number of times per week that the supervisors felt that their employees used the thirteen competencies during the fulfillment of their normal duties. Again the reader is cautioned not to determine curriculum by relying too heavily on the number of times per week that a particular competency is used, but by combining importance of knowing how to do it with the frequency of doing it. To stress this point it might be noted that a policeman might only give artificial respiration on an average of once per two years, but when he must give artificial respiration he must be fully skilled in performing the competency of giving artificial respiration.

Table 41

NUMBER OF TIMES PER WEEK THAT SELECTED COMPETENCIES WERE USED ON THE JOB BY EMPLOYEES ACCORDING TO SUPERVISORS

(Based on Personal Interviews)

	Office and Distribution Cluster (n = 19)	Secretarial Cluster (n = 22)	Industrial Machine Cluster (n = 23)	Health Cluster (n = 22)
Use the telephone effectively	48.7	18.4	6.7	1.4
Complete job-related forms (application, purchase requisitions, invoices, sales receipts, orders)	68.9	34.2	12.0	2.5
Handle receptions and introductions competently	4.5	19.4	1.0	4.1
Take notes effectively	8.5	23.1	8.8	7.5
Write a business letter	2.8	30.3	0.5	0.3
Give instructions orally	99.2	18.4	8.4	15.3
Proofread and edit written communications	8.5	31.1	1.3	7.5
Write a general report	1.0	4.8	0.5	0.3
Organize and lead a conference	1.0	0.1	0.3	0
Present technical data orally	12.8	4.7	4.8	30.3
Participate in a problem-solving or informational discussion group	2.3	0.8	2.4	1.8
Lead and participate in a business meeting (Parliamentary procedure)	.7	0.1	0.1	0
Write a formal, documented report	5.3	0.0	0.4	.5

SOME COMMENTS MADE BY EMPLOYERS DURING THE PERSONAL INTERVIEW

Drafting Supervisor

Contribute your ideas on how a job should be accomplished and if your way is not chosen because of a conference, etc., do not let this rejection of your idea stifle any further contribution on your part.

* *

Listening and cooperation seems to be the basis for the communication needed in this area.

* *

Accounting Supervisor

The ability to get along with people is most important on any job. In accounting, I believe ability is important but no more so than attitude and ambition.

* *

Personnel Director

More stress on how to participate in a job interview.

* *

Marketing Supervisor

Paper work and book work plus responsibility for getting work done on time is a large part of retailing as well as liking to work with customers and other associates.

* *

Tooling Engineer Supervisor

A person can pick up the basic technical skills in school. However, in a work situation they must be able to communicate their thoughts, ideas and criticism effectively.

* *

Operating Room Technician Supervisor

Listen for accuracy in following requests and direction.
Perform work under stress with speed and accuracy.
Ability to communicate with specific, accurate giving and receiving information and data.

* *

Medical Assistant Supervisor

Accuracy in receiving and transcribing information.
Maintain confidentiality.
Reporting and recording data and information to pertinent health team members.

* *

Practical Nursing Supervisor

They should know their limitations.

* *

Stenographic Supervisor

More on proper phone procedures.

Computer Operator/Programmer

For me, the most important thing for an operator is to be able to organize your work. You must be able to adjust for unexpected reports, etc. Also, being well organized gets the best utilization from the equipment.

Also, being the programmer, I feel the most important aspect of that part of my job, is to fully understand the end result needed to write a program.

* *

Assistant Personnel Director

You hit a point where they (technical people) are passed over regardless of their technical ability. A man has to stand up in front of a group, answer reports intelligently . . . that is why many companies are demanding college degrees. Some people are unable to write reports for the newspaper. If they can't express themselves, they are going to be in trouble. In companies where it is up or out, it is serious.

* *

CONCLUSIONS AND RECOMMENDATIONS

This survey project has revealed that employers and VTAE graduates for each of the 15 occupational areas surveyed indicated that competency in some communication skills is more important than in others.

Secondly, the survey revealed that different occupations do indeed require different levels of competency in many of the 40 communication skills surveyed.

The survey results also gave strong support to the cluster concept; evidence surfaced that Wisconsin VTAE educational programs can be clustered for the purpose of teaching-learning communication skills.

If Communication Skills classes in the Wisconsin Vocational, Technical and Adult Education system are to equip their graduates with the communication skills that will enable them to function effectively at the time of initial employment and to advance on the job without difficulty, then the following is recommended:

That input about the need for competency in specific communication skills from the supervisory level of business and industry and from the employees be used to help develop the courses of study for communication skills classes.

That the concept of clustering be used in scheduling students for communication skills classes. This would enable the teacher to do a better job of preparing these students with the communication skills they need on the job because of the relatedness of job tasks and responsibilities of many occupations.

That further state-wide communication skills surveys similar to this one be made of other occupational areas for which the Wisconsin VTAE system is training men and women.

BIBLIOGRAPHY

1. Austin, John J. and Donald A. Sommerfeld. "An Evaluation of Vocational Education for Disadvantaged Youth," Muskegon Public Schools, Michigan, 1967.

2. Crawford, Lucy. "A Competency Pattern Approach to Curriculum Construction in Distributive Education," Final Report, Virginia Polytechnic Institute, Blacksburg, 1967.

3. Dickerson, Jack, and Paulsen, Russell. "Analysis of Skills Needed by Graduates of Associate Degree Insurance Major," Final Report Project No. 15.036.151.222, 1972.

4. Lewis, Roberta P. "A Study to Determine the Communication Skill Needs of the Vocational Student in the Basic Communications Curriculum," Unpublished Seminar paper, Wisconsin State University-Eau Claire, 1971.

5. Morgan, Glen Michael. "Speech Qualification Traits Needed by Marketing Graduates of Lakeshore Technical Institute," Unpublished Seminar paper, University of Wisconsin-Oshkosh, 1973.

6. Nichols, Charles F. "Vocational Education for the Disadvantaged-Seven Years Later," American Vocational Journal, 45 (Nov. 1970), p. 23.

7. Radloff, David Maurice. "An Examination to Determine the English Competencies Required of Secretaries in the Administrative, Legal and Medical Areas with a Synthesis into a Core of Common Competencies to be Used in Forming a Basis for an English Curriculum," Unpublished Master's Thesis, University of of Wisconsin-Stout, 1973.

8. Walde, Everett F. "A Survey to Determine the Effectiveness of a Communication Skills Course for Trade and Industrial Graduates of a Technical Vocational School," Journal of Technical Writing and Communication, Vol. 3 (2), pp. 109-130, Spring, 1973.

9. Weinstock, Chuck. "Solutions for the Seventies: An Analysis of Competency-Based Learning and Cluster Colleges--A Report of the National Dissemination Project and the Community Colleges," Final Report, Washington State Board for Community College Education, Seattle Research and Planning Office, 1973.

APPENDICES

Appendix A	Bibliography of Communication Skills Survey Efforts	79
Appendix B	Microfiche Documents	81
Appendix C	A List of Communication Skills and Tasks	84
Appendix D	Cover Letter and Questionnaire Distributed to Faculty and Management Team Members of Mid-State Technical Institutes	88
Appendix E	Members of Ad Hoc Committee	93
Appendix F	Cover Letter and Questionnaire Sent to Supervisors (Employers)	95
Appendix G	Cover Letter and Questionnaire Sent to VTAE Graduates	101
Appendix H	Cover Letters for Second Mailing	107

APPENDIX A

BIBLIOGRAPHY OF STUDIES IN COMMUNICATION SKILLS

APPENDIX A

BIBLIOGRAPHY OF STUDIES IN

COMMUNICATION SKILLS

1. Periodicals

Walde, Everett E. "A Survey to Determine the Effectiveness of a Communication Skills Course for Trade and Industrial Graduates of a Technical-Vocational School," Journal of Technical Writing & Communications, Spring, 1973.

2. Unpublished Works

Erickson, Harold P. "An Effective English Program for the Technical School," Unpublished Master's Thesis, Wisconsin State University-La Crosse, 1967.

Lake, Catherine L. "A Survey of Business, Science, Industry and Research for the Purpose of Ascertaining the Desires and Needs of Potential Employers Relative to Speech Education for the Technician at Oregon Technical Institute," Unpublished Master's Thesis, University of Oregon, 1968.

Lewis, Roberta P. "A Study to Determine the Communication Skill Needs of the Vocational Student in the Basic Communications Curriculum." Unpublished Master's Thesis, University of Wisconsin-Eau Claire, 1971.

Morgan, Glen Michael. "Speech Qualification Traits Needed by Marketing Graduates of Lakeshore Technical Institute." Unpublished Master's Thesis, University of Wisconsin-Oshkosh, 1973.

Radloff, David Maurice. "An Examination to Determine the English Competencies Required of Secretaries in the Administrative, Legal and Medical Areas with a Synthesis into a Core of Common Competencies to be Used in Forming a Basis for an English Curriculum." Unpublished Master's Thesis, University of Wisconsin-Stout, 1973.

APPENDIX B

MICROFICHE DOCUMENTS

APPENDIX B

MICROFICHE DOCUMENTS

ED 022 451 Study of Frequency of Errors and Areas of Weaknesses in Business Communications Classes at Kapiolani Community Coll., Uehara, Soichi, January, 1968.

ED 074 564 Modern Trends in Persuasion in Business and Industry by William S. Howell, April, 1973.

ED 021 516 An Effective English Program for the Technical School, by Harold P. Erickson, December, 1967.

ED 012 765 Human Relations in Agricultural Occupations, Agricultural Machinery--Sales and Service Occupations, Module No. 5. Ohio St. Univ., Columbus, Center for Voc. Educ., August, 1965.

ED 038 966 The Relationship of Organizational and Leader Factors to Communication Effectiveness in Ill. Public Jr. Coll. by James M. Howard, 1970.

ED 074 566 Planning for School District Organization--Selected Position Papers Ralph D. Purdy, Ed. Great Plains School District Organization Project, Lincoln, Neb., June, 1968.

ED 020 197 The Teaching of College English to the Scientific and Technical Student. Final Report of the Committee on College English for the Scientific and Technical Student, National Council of Teachers of English, Estrin, H.A. and others. National Council of Teachers of Eng., Ill. November, 1963.

ED 062 552 Human Attribute Requirements of Work Elements: Further Development of the Occupation Analysis Inventory. Robert W. Neeb, et al. North Carolina State Univ., Raleigh Center for Occupational Education, 1971.

ED 065 689 Delphi: A Planning Tool. Charles O. Hopkins, et al. Oklahoma State Dept. of Vocational and Technical Education Stillwater Div. on Research, Planning and Evaluation. January, 1972.

ED 066 618 Technical Education, Careers Unlimited. Robert W. Worthington, March 15, 1972.

ED 054 364 Industry-Education Cooperative Program for Preservice and Inservice Vocational and Technical Teacher Training. Final Report. Donald V. Brown. Union Carbide Corp. Oak Ridge, Tenn. Nuclear Div. December, 1970

ED 067 492 New Directions in the World of Work. A Conference Report. Charlton R. Price. Upjohn (W.E.) Inst. for Employment Research, Kalamazoo, Mich. March, 1972.

ED 034 881 The World of Working and Learning. Bush, Donald O., and others. Rocky Mt. Ed. Lab., Inc., Greeley, Colo. Off. of Ed. (DHEW), Wash., D.C. Bureau of Research. June, 1969.

ED 059 404 Strategies for Teaching English in Career Education. Final Report. Gary L. Houpt, Comp. Delaware State Dept. of Public Instruction, Dover. August, 1971.

ED 062 554 Two Million Without Skills. Muriel Shay Tapman. Office of Education (DHEW), Washington, D. C. Bureau of Educational Personnel Development. February, 1972.

ED 065 690 A Comprehensive Career Education Model: A Bridge Between School and Work. Bruce Reinhart, 1972.

ED 068 724 Work Experience Education; Learning Activity Packages: Exploratory Goals 3-5. California State Polytechnic Coll., San Luis Obispo, 1971.

ED 068 723 Work Experience Education; Learning Activity Packages: General Goals 1-2. California State Polytechnic Coll., San Luis Obispo, 1971.

ED 068 722 Work Experience Education; Learning Activity Packages: Vocational Goals 3-5. California State Polytechnic Coll., San Luis Obispo, 1971.

ED 068 721 Work Experience Education; Learning Activity Packages: Exploratory Goals 1-2. California State Polytechnic Coll., San Luis Obispo, 1971.

ED 068 720 Work Experience Education Learning Activity Packages: Vocational Goals 1-2. California State Dept. of the Youth Authority, Sacramento, 1971.

ED 068 719 Work Experience Education: Research for Accountability. California State Polytechnic Coll., San Luis Obispo, 1971.

ED 072 262 Curriculum Focus: Occupations and the World of Work Information Series 5. Paul W. Devore. West Virginia Univ., Morgantown Appalachian Center, January, 1969.

ED 076 797 Survey of Post-Placement Experience of TAT Graduates. Charles C. Worth, et al. Oak Ridge Associated Universities, Tenn. April, 1973.

ED 054 347 Associate Degree Technicians' Judgments on Quality of Instruction and Course Relevancy.

ED 053 318 The Measurement of Job Relatedness for Vocational Program Evaluation. David N. Wheeler. Minesota Research Coordinating Unit in Occupational Education Minneapolis, May, 1971.

APPENDIX C

LIST OF COMMUNICATION SKILLS AND TASKS

APPENDIX C

LIST OF COMMUNICATION SKILLS AND TASKS

Listening

Comprehending Instructions
Listening Objectively (Evaluate Message)
Recognize Audience Reaction
Following Oral Instructions
Listen for Main Ideas
Tune Out Unessential Material
Summarize (Paraphrase)
Analyze Supportive Information
Detect Fallacious Reasoning (False, Incorrect)
Conclusions
Tact & Discretion
Ability to Ask Questions to Clarify
Friendliness and Kindness
Honesty and Reliability
Confidentiality
Emergency Situations Involving People
Ability to Accept Constructive Criticism
Maintain Emotional Control
Separate Fact from Opinion
Accuracy

Writing

Written Reports (Summary, Technical, Abstracts, Accident, Service and Inspection)
Written Directions (Instructions)
Business Letters
Recording Information from a Client
Order forms
Requisitions
Note Taking
Proofreading (Editing)
Use of Abbreviations or Numbers (Handling Statistical Material on Reports)
Spelling
Punctuation
Definition and Description of a Mechanism, Technical
Process Report (Descriptive)
Preparation of Graphic Illustration (Use Graphic Materials in Writing)
Personal or Product Evaluation
Lab Reports
Policy Manuals
Sales Literature, Brochures, Proposals, Letters
Project Proposal
Word Usage (Precision)

Outlining
Grammar (Syntax, Words, and Clear Sentences)
Minutes of Meeting
Processing Records
Accuracy

Reading

Comprehension
Skimming and Scanning
Must Read and Understand Job Instructions
Must Read and Understand Safety Instructions
Must Read and Understand Office Memorandums
Read to Distinguish Fact from Opinion (Biased from Unbiased)
Ability to Read and Comprehend Technical Material or Physical Principles (Legal Engineering) (Journals) (Specifications) (Numerical Information)
Signs and Symbols
Tables and Graphs (Charts, Diagrams, Drawings and Patterns)
Summarizing (Mentally Digesting)
Find Main Idea and Supporting Devices
Retention (Short Term/Long Term)
Reading for Pleasure and Enjoyment
Conclusion
Understanding Terminology
Processing Records
Accuracy

Speaking

Giving Directions (Instructing Others)
Telephone Techniques (Appointments, Placing and Receiving Business Calls)
Asking Questions in Order to Get Specific Information
Brainstorming
Decision Making
Orally Presenting Technical Report Data
Defending Controversial Position
Arrange for and Lead an Instructional Conference
Arrange for and Lead a Problem Solving Conference
Informative Talk
Orally Sell Himself and What He Knows
Orally Obtain a Composite of Views and Then Sell the Most Desirable
Giving Information Orally About New Developments or Procedures In a Clear-Cut Understandable Manner
Express Ideas Clearly and Concisely
Orally Express Views or Acquaint Non-Technical Individuals or Groups with a Problem Solution, Process or Other Technical Endeavor
Orally Defend a Good Idea Under Heavy Cross Fire from His Superiors
Demonstrations with Visual Aids (Graphic Illustrations)
Personal Interviews for the Company

Participate taking Charge of Business Meetings, Conferences, Group Communication Leadership and Participation
Dealing with Customers' Complaints
Dictating Letters
Orally Summarize
Introductions and Reception
Perception (Feedback-Perceptually aware of non-verbal communication)
Reception of Patients or Others (Personal Contact Ability)
Public Relations-Loyalty
Bring About Attitude, Opinion, or Belief Change in others
Ability to Put Ideas Into Words
Social Interaction (Get Along With Others)
Annunciation-Pronunciation-Voice

Others

Working With Others (Alone, Independently)
Adjusting to His position
Displaying Team Spirit
Displaying Leadership
Understanding of Others
Establishing Smooth Working Relationships With Others
Being A Well Adjusting, Emotionally Mature Individual
Processing Records
Tact and Discretion
Ability to Adjust to a Variable Work Load Independently
Ability to Train and Supervise Others
Ability to Make an Initial Good Impression
Willingness to Maintain the Objectives of the Company
Developing a Capacity to Reason
Develop a Sense of Values - Able to Use Methods of Critical Thinking for the Solution of Problems and for the Discrimination Among Values
Respect for the Rights of Others
Adaptability to Routine
Personal Contact Ability
Emotional Control
Emergency Situations Involving People
Bring About Attitude, Opinion, or Belief Change in Others
Decision making
An Awareness of Non-verbal Communication
Responding Effectively
Effective Response to Non-Verbal Communication

APPENDIX D

COVER LETTER AND QUESTIONNAIRE DISTRIBUTED TO FACULTY AND MANAGEMENT TEAM MEMBERS OF MID-STATE TECHNICAL INSTITUTE

MID-STATE VOCATIONAL, TECHNICAL AND ADULT EDUCATION DISTRICT
Stevens Point Marshfield Wisconsin Rapids

MEMORANDUM

To: All Staff Members

From: M. H. Schneeberg, Assistant Director-Educational Services
Max Farning, Administrator-Research and Planning

Date: March 5, 1974

Subject: Communication Skills Competencies

The State Board staff has awarded a Part B-Basic Grant--Educational Development and Teacher Education--to Mid-State Vocational, Technical and Adult Education District to conduct a state-wide study to determine the communication skills competencies required by graduates of our vocational-technical institutes. How well are we preparing our graduates for the world-of-work in communication classes? What learning activities should be occuring in our communication classes?

Both graduates of our institutes and employers will be contacted by means of a questionnaire and by personal interview. Would you please very critically examine the attached list of competencies and do the following:

1. eliminate (draw a line through) those you feel irrelevant and should not be a part of a communications curriculum,

2. add those competencies that you feel are important but not included,

3. change those that you feel should be changed (please rewrite these), and

4. make any further suggestions that you wish to make.

TO MAKE THIS PROJECT A SUCCESS YOUR UNRESERVED BUT HONEST COMMENTS ARE NECESSARY!

The results of this project will provide input for a communications workshop at the University of Wisconsin-Stout this summer.

Please respond to this questionnaire as if you were representing the occupation that you are now teaching.

This study is being conducted by Mr. Ralph Mahnke and Mrs. Elaine Boyce. Please return the questionnaire to Mr. James Olson, Mrs. Mary Zurawski, or Dr. Max Farning.

Thank you.

MHS/MF:cad

QUESTIONNAIRE

WHERE ARE YOU EMPLOYED: _____
(Name of Company)

EMPLOYER'S ADDRESS: _____
(Address)

_____
(City) (State) (Zip Code)

JOB TITLE OR DESCRIPTION: _____

In your opinion, to what extent are the following communication skills important to an employee in your company. Please indicate the level of importance of each of the skills by placing an "X" in one of the columns.

	Extremely Important	Very Important	Important	Moderately Important	Not Important
Adapting word usage to situation					
Effective use of the voice and correct pronunciation of words					
Working cooperatively with others					
Listen tactfully					
Ability to follow up problems and give attention to details					
Effective use of the telephone					
An ability to respond to non-verbal communication					
Tactfully handling receptions and introductions					
Short-term reading retention					
Ability to listen to criticism					
Write a business letter					
Completing job related forms (purchase requisitions, invoices, sales receipts)					
Proofreading and editing					
Use of abbreviations and numbers					

	Extremely Important	Very Important	Important	Moderately Important	Not Important
Orally giving directions and instructions					
Reading graphic illustrations (charts, tables, graphs)					
Understanding occupational terminology					
Write a short report clearly and concisely (Summary, Process, Technical, Laboratory, Memorandums, Minutes of Meeting, Accident, Service Product Evaluations, Constructive Criticism.)					
Responding to customers' complaints					
Questioning for specific information in decision making					
Grammar					
Write a several paragraph report					
Orally expressing ideas clearly and concisely					
Preparing graphic illustrations (charts, tables, graphs)					
Reading to distinguish fact from opinion					
Understanding oral instructions and directions					
Spelling					
Orally presenting information with the use of visual aids					
Punctuation					
Orally presenting technical data					
Reading to comprehend job related and technical materials					

	Extremely Important	Very Important	Important	Moderately Important	Not Important
Skimming					
Ability to adjust to a variable work load					
Write a sentence					
Leading and/or participating in a problem-solving discussion or instructional conference					
Listen for main ideas by tuning out unessential material					
The ability to work independently					
Organizing information in outline form					

COMMENTS:

APPENDIX E

MEMBERS OF AD HOC COMMITTEE

APPENDIX E

AD HOC COMMITTEE

Mrs. Elaine Boyce
Research Assistant

Mrs. Wanda Eisenhut
Business Education Instructor

Dr. Max Farning
Administrator-Research and Planning

Mr. Francis Gotz
Placement Director

Mr. Wilbert Knobeck
Auto Mechanics Department Head Vocational T & I

Mr. James Koehntopp
Diesel Mechanics Instructor

Mr. Ralph Mahnke
Research Assistant

Mr. Melvin H. Schneeberg
Assistant Director-Educational Services

APPENDIX F

COVER LETTER AND QUESTIONNAIRE SENT TO SUPERVISORS (EMPLOYERS)

Mid-State Technical Institute

WISCONSIN RAPIDS CAMPUS
Five Hundred 32nd Street North
Wisconsin Rapids, WI 54494
715/423-5650

Mrs. Robert Smith, Supervision of Accounting
Eastman Manufacturing Company
1493 Roosevelt Avenue
Eau Claire, WI 49730

Dear Mrs. Smith:

Mid-State Technical Institute at Wisconsin Rapids is conducting a survey for the Wisconsin Board of Vocational, Technical and Adult Education. The purpose of this survey is to determine what communications competencies should be taught in vocational-technical institutes located throughout Wisconsin.

Because our schools are interested in providing employers with highly qualified graduates, it is your advice and counsel that can provide us with the answers we need. How important are communication skills for your employees? To help us measure the importance of these skills, we are enclosing a questionnaire that we would like you to complete.

We would appreciate a prompt return so that the results of this survey will be available to a Communication Skills Workshop which will be at the University of Wisconsin-Stout. Your response will become a part of a greater project which is being conducted at the University of Wisconsin-Stout.

All of your responses will be treated confidentially.

Please return the questionnaire in the self-addressed, postage-paid envelope.

WE SINCERELY THANK YOU.

Sincerely yours,

Max Farning

Max Farning, Ph.D.
Administrator-Research and Planning
Project Supervisor

Ralph Mahnke

Ralph Mahnke
Researcher
Communication Skills Project

MF:RM:cad

Enclosures

This QUESTIONNAIRE Should Be Completed By The ACCOUNTING SUPERVISOR Or Person In Similar Position

QUESTIONNAIRE

WHERE ARE YOU EMPLOYED: _____
(Name of Company)

EMPLOYER'S ADDRESS: _____
(Address)

_____
(City) (State) (Zip Code)

YOUR JOB TITLE OR DESCRIPTION: _____

In your opinion, to what extent are the following communication skills important to an employee in your company. Please indicate the level of importance of each of the skills by placing an "X" in one of the columns.

	Extremely Important	Very Important	Important	Moderately Important	Not Important
Adapt written word usage to the job situation					
Adapt spoken word usage to the job situation					
Use the voice effectively and pronunciation of words correctly					
Maintain confidentiality concerning job-related information					
Use the telephone effectively					
Respond to non-verbal communication (Body language)					
Complete job-related forms (Applications, purchase requisitions, invoices, sales receipts, orders)					

	Extremely Important	Very Important	Important	Moderately Important	Not Important
Punctuate					
Express ideas clearly and concisely					
Present technical data orally					
Read to comprehend job-related and technical materials					
Lead a problem-solving or informational discussion group					
Participate in a problem-solving or informational discussion group					
Listen for main ideas					
Prepare written work neatly					
Skim for pertinent information					
Lead and participate in a business meeting (Parliamentary procedure)					
Understand occupational terminology					
Read aloud effectively					
Recognize fact from opinion					
Listen tactfully					

	Extremely Important	Very Important	Important	Moderately Important	Not Important
Handle receptions and introductions competently					
Remember essential information					
Take notes effectively					
Write a business letter					
Use abbreviations and numbers in report writing					
Give instructions orally					
Understand oral instructions					
Interpret and explain graphic illustrations (graphs, charts, tables)					
Proofread and edit written communications					
Write a general report					
Work cooperatively with other employees					
Organize and lead a conference					
Question individuals to clarify information					
Use Grammar correctly					
Spell correctly					

	Extremely Important	Very Important	Important	Moderately Important	Not Important
Give attention to details					
Adjust to a variable work load					
Participate in a conference					
Write a formal, documented report					

(Please list any other competencies that you feel are necessary.)

COMMENTS:

THANK YOU!

APPENDIX G

COVER LETTER AND QUESTIONNAIRE SENT TO VTAE GRADUATES

Mid-State Technical Institute

WISCONSIN RAPIDS CAMPUS
Five Hundred 32nd Street North
Wisconsin Rapids, WI 54494
715/423-5650

Mr. William Adams
1417 Western Street
Wisconsin Rapids, WI 54494

Dear Mr. Adams:

Mid-State Technical Institute at Wisconsin Rapids is conducting a survey for the Wisconsin Board of Vocational, Technical and Adult Education. The purpose of this survey is to determine what communications competencies should be taught in vocational-technical institutes located in Wisconsin.

You, as an employee and as a graduate of a vocational-technical school, are in a unique position to provide us with the information that we need. How important are communication skills in your occupation? To help us measure these skills, we are enclosing a questionnaire that we would like to have you complete.

We would appreciate a prompt return so that the results of this survey will be available for a Communication Skills Workshop which will be at the University of Wisconsin-Stout. Your response will become a part of a greater project which is being conducted at the University of Wisconsin-Stout.

All of your responses will be treated confidentially.

Please return the questionnaire in the self-addressed, postage-paid envelope.

WE SINCERELY THANK YOU.

Sincerely yours,

Max Farning

Max Farning, Ph.D.
Administrator-Research and Planning
Project Supervisor

Ralph Mahnke

Ralph Mahnke
Researcher
Communication Skills Project

MF:RM:cad

Enclosures

Mr. William Adams
Mechanical Design
Mid-State

QUESTIONNAIRE

WHERE ARE YOU EMPLOYED: _____
(Name of Company)

EMPLOYER'S ADDRESS: _____
(Address)

_____
(City) (State) (Zip Code)

YOUR JOB TITLE OR DESCRIPTION: _____

In your opinion, to what extent are the following communication skills important in your work. Please indicate the level of importance of each of the skills by placing an "X" in one of the columns.

	Extremely Important	Very Important	Important	Moderately Important	Not Important
Adapt written word usage to the job situation					
Adapt spoken word usage to the job situation					
Use the voice effectively and pronunciation of words correctly.					
Maintain confidentiality concerning job-related information					
Use the telephone effectively					
Respond to non-verbal communication (Body language)					
Complete job-related forms (Applications, purchase requisitions, invoices, sales receipts, orders)					

	Extremely Important	Very Important	Important	Moderately Important	Not Important
Handle receptions and introductions competently					
Remember essential information					
Take notes effectively					
Write a business letter					
Use abbreviations and numbers in report writing					
Give instructions orally					
Understand oral instructions					
Interpret and explain graphic illustrations (graphs, charts, tables)					
Proofread and edit written communications					
Write a general report					
Work cooperatively with other employees					
Organize and lead a conference					
Question individuals to clarify information					
Use Grammar correctly					
Spell correctly					

	Extremely Important	Very Important	Important	Moderately Important	Not Important
Punctuate					
Express ideas clearly and concisely					
Present tecinical data orally					
Read to comprehend job-related and technical materials					
Lead a problem-solving or informational discussion group					
Participate in a problem-solving or informational discussion group					
Listen for main ideas					
Prepare written work neatly					
Skim for pertinent information					
Lead and participate in a business meeting (Parliamentary procedure)					
Understand occupational terminology					
Read aloud effectively					
Recognize fact from opinion					
Listen tactfully					

	Extremely Important	Very Important	Important	Moderately Important	Not Important
Give attention to details					
Adjust to a variable work load					
Participate in a conference					
Write a formal, documented report					

(Please list any other competencies that you feel are necessary.)

COMMENTS:

THANK YOU!

APPENDIX H

COVER LETTERS FOR SECOND MAILING

Mid-State Technical Institute

WISCONSIN RAPIDS CAMPUS
Five Hundred 32nd Street North
Wisconsin Rapids, WI 54494
715/423-5650

H E L P !
We Need Your Response
To Make Communications Courses
R E L E V A N T

Mr. William Adams
1417 Western Street
Wisconsin Rapids, WI 54494

Dear Mr. Adams:

Mid-State Technical Institute at Wisconsin Rapids is conducting a survey for the Wisconsin Board of Vocational, Technical and Adult Education. The purpose of this survey is to determine what communications competencies should be taught in vocational-technical institutes located in Wisconsin.

You, as an employee and as a graduate of a vocational-technical school, are in a unique position to provide us with the information that we need. How important are communication skills in your occupation? To help us measure these skills, we are enclosing a questionnaire that we would like to have you complete.

We would appreciate a prompt return so that the results of this survey will be available for a Communication Skills Workshop which will be at the University of Wisconsin-Stout. Your response will become a part of a greater project which is being conducted at the University of Wisconsin-Stout.

All of your responses will be treated confidentially.

Please return the questionnaire in the self-addressed, postage-paid envelope.

WE SINCERELY THANK YOU.

Sincerely yours,

Max Farning

Max Farning, Ph.D.
Administrator-Research and Planning
Project Supervisor

Ralph Mahnke

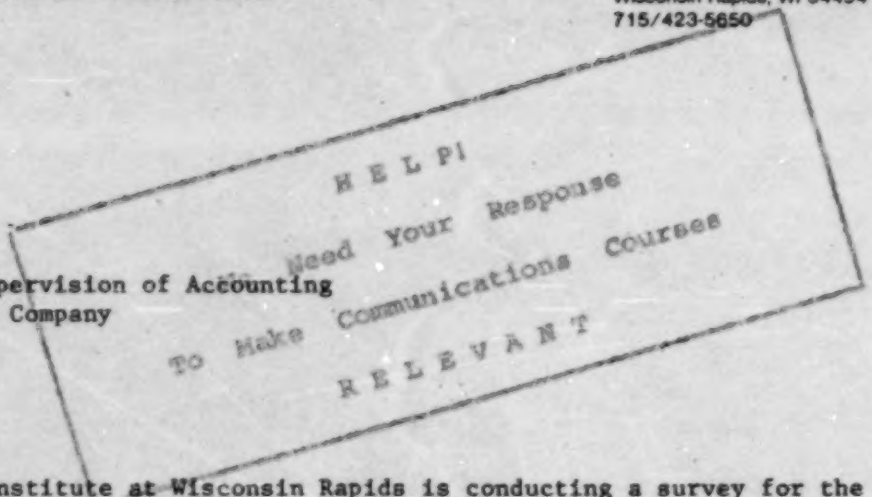
Ralph Mahnke
Researcher
Communication Skills Project

MF:RM:cad

Enclosures

Mid-State Technical Institute

WISCONSIN RAPIDS CAMPUS
Five Hundred 32nd Street North
Wisconsin Rapids, WI 54494
715/423-5650



Mrs. Robert Smith, Supervision of Accounting
Eastman Manufacturing Company
]493 Roosevelt Avenue
Eau Claire, WI 49730

Dear Mrs. Smith:

Mid-State Technical Institute at Wisconsin Rapids is conducting a survey for the Wisconsin Board of Vocational, Technical and Adult Education. The purpose of this survey is to determine what communications competencies should be taught in vocational-technical institutes located throughout Wisconsin.

Because our schools are interested in providing employers with highly qualified graduates, it is your advice and counsel that can provide us with the answers we need. How important are communication skills for your employees? To help us measure the importance of these skills, we are enclosing a questionnaire that we would like you to complete.

We would appreciate a prompt return so that the results of this survey will be available to a Communication Skills Workshop which will be at the University of Wisconsin-Stout. Your response will become a part of a greater project which is being conducted at the University of Wisconsin-Stout.

All of your responses will be treated confidentially.

Please return the questionnaire in the self-addressed, postage-paid envelope.

WE SINCERELY THANK YOU.

Sincerely yours,

Max Farning

Max Farning, Ph.D.
Administrator-Research and Planning
Project Supervisor

Ralph Mahnke

Ralph Mahnke
Researcher
Communication Skills Project

MF:RM:cad

Enclosures